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DGO. 11. 160-164 Index  
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# KODAIKANAL OBSERVATORY BULLETIN

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# Kodaikanal Observatory

Bulletin No. CLX

## Distribution of Sunspots in Longitude

A. S. RAMANATHAN AND R. JAYANTHAN

*Abstract*:—A study of the distribution of sunspot activity in longitude has been made for six solar cycles covering the period 1889 — 1954. Correction for differential rotation for individual groups has been made. The study has revealed that (a) spot activity integrated over a complete cycle shows meridional structure (b) the centres of spot activity show occasionally migration in longitude; but this migration is neither regular nor always in the same direction.

### *Introduction*

Attempts in the past to study the distribution of sunspots in longitude were mainly directed towards finding out some law of periodicity analogous to the well known relations representing changes in the latitudes of spots during the eleven year cycles. The most comprehensive of these was that of Losh (1938) who has also given a good summary of earlier work in the field. Basing her work on the data in the Greenwich photoheliographic results for the years 1916 — 1934, Losh concluded that there are strong indications of regions of maximum and minimum solar activity inferred from a study of both the Wolf numbers grouped according to synodic solar rotations and the distribution of sunspots in heliographic longitude. She also noticed that the regions of maximum and minimum activity do not necessarily appear in the same longitudes in the northern and southern hemispheres but show a strong tendency to appear in regions approximately  $180^\circ$  apart perhaps at the opposite extremities of a diameter of the sun.

### *Methods and Results*

The present investigation was undertaken with a view to check the rather inconclusive results of Losh. Also the study has been extended to cover a longer period (1889—1954). The precision of the analysis has been improved by applying corrections to the observed longitudes of every individual spot group taking into account differential rotation of the sun. The apparent drift in longitude that any spot group will show was calculated from Carrington's formula  $\xi = 14^\circ - 2^\circ \cdot 60 \sin^2 \phi$  where  $\phi$  is the latitude and  $\xi$  the angular velocity of the surface layer (in degrees per day).

Drift corrections applied to the observed longitudes of spot groups (based on a constant solar rotation period of 25.38 days) yield longitudes referred to solar rotation 780 beginning on January 13.42, 1912. This would mean that the corrected values of the longitudes would be with reference to the commencement of rotation 780, for a rigid sun.

The corrected longitudes and the mean areas of sunspot groups (corrected for foreshortening) were tabulated for all the years under study for the eight latitude belts  $0-10^\circ$ ,  $10-20^\circ$ ,  $20-30^\circ$  and greater than  $30^\circ$  north and south in 36 longitude zones of  $10^\circ$  each. Graphs were drawn between the longitude and the total spot area for each year for the eight latitude zones separately and then combining all latitudes for each hemisphere separately. Graphs were also drawn between longitude and total area for complete eleven year cycles for latitude intervals  $(0-20^\circ)$  and  $(0-90^\circ)$  north and south.

The curves showing the distribution in longitude of spot activity for each year separately did not reveal any striking regularity. No zone of maximum activity was found to be common to all year, nor was there a prominent progressive change in the longitudinal zones showing maximum activity. However some of the curves drawn for latitude interval  $0-90^\circ$  for each hemisphere showed the zone of maximum activity around  $0^\circ$  (or  $360^\circ$ ) in the earlier part of the cycle and near  $180^\circ$  towards the end, there being some suggestion of a migration of the zone of maximum activity towards middle longitudes as the cycle progressed.

The curves representing distribution in longitude of spot activity for complete eleven year cycles showed some striking regularities. There was very close similarity between the curves for latitude interval  $(0-20^\circ)$  and for the latitude interval  $(0-90^\circ)$  for any cycle in either hemisphere. Of course this is partly due to the fact that the major

part of the spot activity in a cycle is confined to the latitude belt ( $0-20^\circ$ ). Also the curves for the northern and southern hemispheres for any cycle resembled each other. This similarity was found to be very close in the cycle commencing in 1923. This would mean that there is no reason to believe that the distribution in longitude of sunspot activity in the northern hemisphere is different from the southern as has been found by earlier workers in this field. Figure 1 (a-f) represents the distribution of sunspot activity in longitude for complete eleven year cycles for the latitude interval ( $0-90^\circ$ ) for the northern and southern hemispheres.

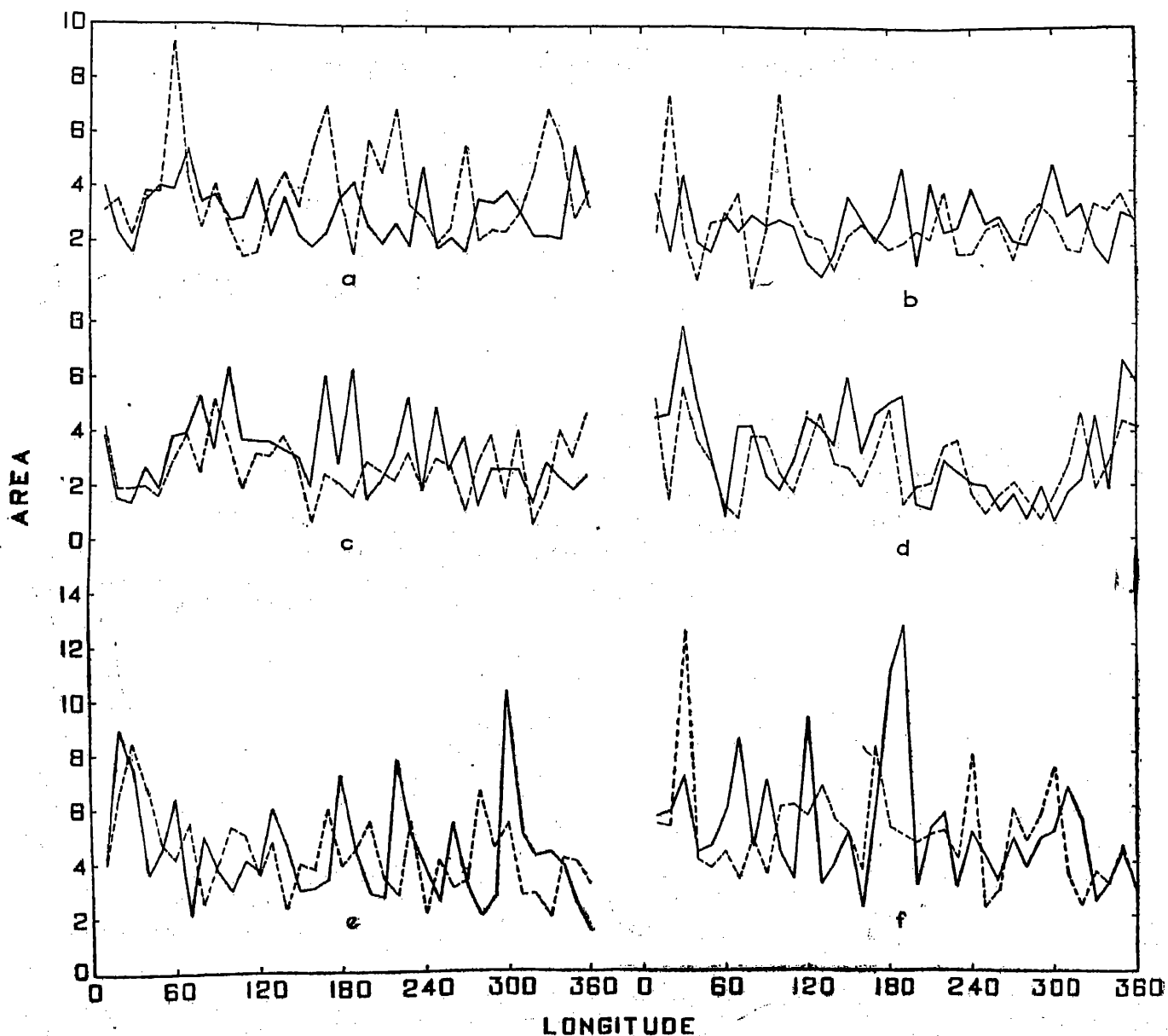


FIGURE 1 (a-f):—Total spot area plotted against heliographic longitude for all latitudes ( $0-90^\circ$ ) for the six eleven year cycles commencing from 1889 and ending in 1954.

The above facts lead to the conclusion that spot activity integrated over a complete cycle shows meridional structure.

In order to examine more carefully the migration in longitude of centres of strong spot activity, graphs were drawn representing the principal centres of spot activity in longitude for each year for the entire latitude interval ( $0-90^\circ$ ) for each hemisphere separately. It was not difficult to identify the principal centres, as distinct longitudinal zones showed activity far more than other zones. When the principal centres of activity extended to two or three adjacent zones the weighted centre of the activity was found and the zone in which this centre lay was taken to be the active

zone. Figure 2 represents the distribution in longitude of the principal centres of spot activity in the northern and southern hemisphere respectively. From the figure one can see that there is a tendency for migration in longitude of the centres of activity with time on some occasions. In such cases the migration is regular and conspicuous whereas at other times the migration, if at all, there is neither uniform nor in the same direction. Whereas the migration of active sunspot zones is quite apparent in the first four cycles (1889—1934) their distribution in longitude remains practically the same in the last two cycles (1934—1954) and the migration is quite inconspicuous. Thus it would appear that neither are there distinct zones of spot activity fixed on the hypothetical rigid sun for all the time nor is there evidence to show that there is *always* a regular migration in longitude of the centres of activity with the advance of time

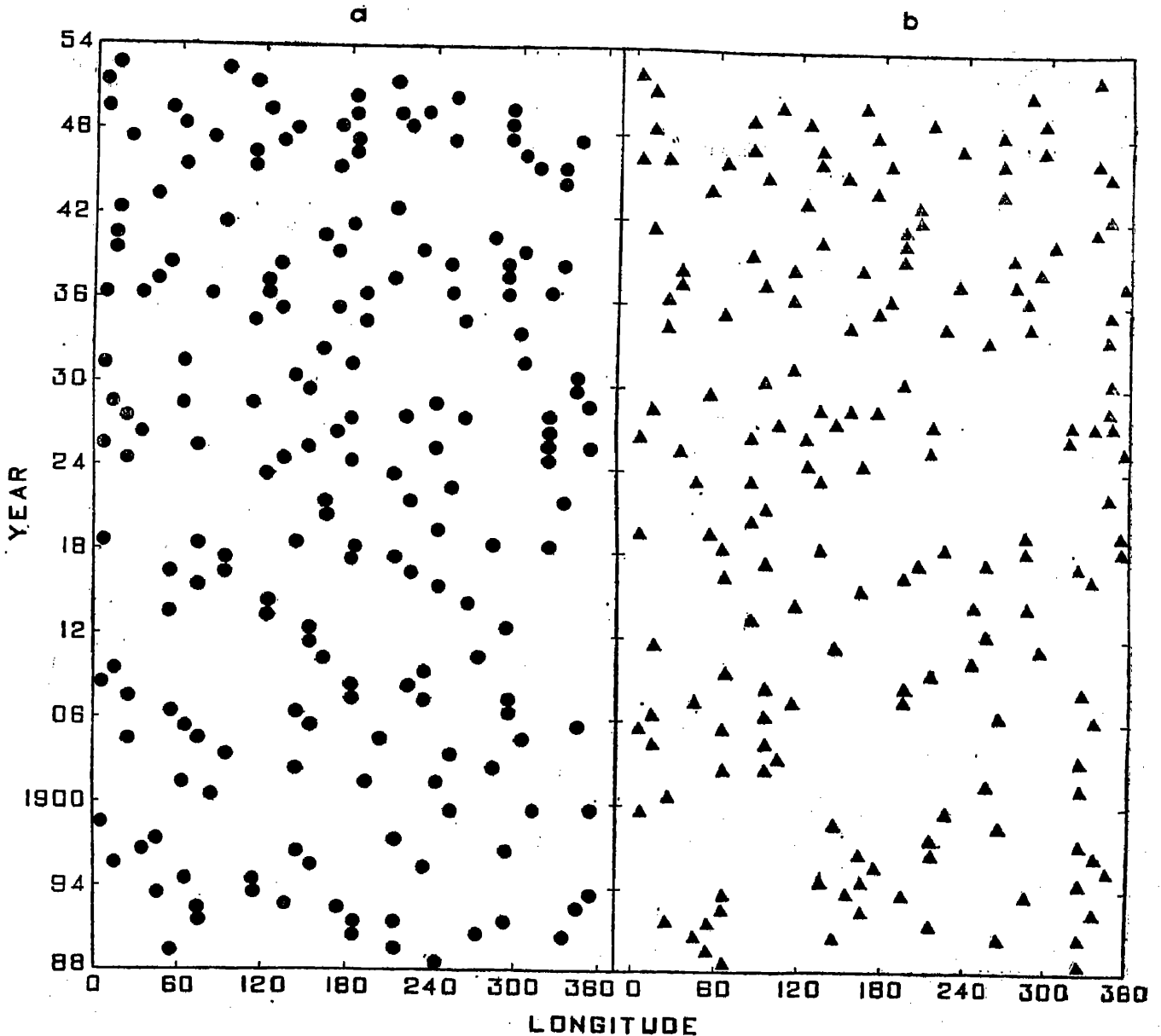


FIGURE 2 (a & b) :—Distribution of principal centres of sunspot activity in longitude for the period 1889 to 1954 for northern hemisphere (●) and southern hemisphere (▲) respectively.

If we proceed on the assumption that there are fixed centres of activity on a rigid sphere in the interior and that the layers above have the angular velocities observed on the surface, the reduction of the observed positions of spot groups to a single system of coordinates fixed on the hypothetically rigid sun as we have done should give a constant distribution of spot activity independent of time. Since this is not the case and since spots are not likely to be caused by agencies above the photosphere we are led to conclude that the centres of activity on the sun are not confined to any distinct longitudinal zones.

A statistical analysis of the results also revealed that the distribution of spot activity in longitude during the six cycles analysed, is random. For convenience the whole surface was divided into six longitude zones each of  $60^\circ$  and the calculated coefficient of association between the various sunspot cycles and the occurrence of spot activity in particular zones yielded the low value of 0.14.

The relation between the random drift of the centres of activity with the probable slow torsional oscillations of the equatorial belt of the sun is not easy to decide. We believe, however, that a detailed study of the drift in longitude of localised regions of magnetic field observed over a considerable period may throw some light on the problem.

We wish to record here the valuable discussions we had on the problem with late Dr. A. K. Das, former Deputy Director General of this observatory. Our thanks are also due to Dr. M. K. Vainu Bappu, Director of this Observatory, who kindly went through the paper and offered valuable suggestions.

Kodaikanal Observatory,  
February 1962.

A. S. Ramanathan  
R. Jayanthan.

*Reference*

Losh, H.M.

1938, Pub. Obs. U. Michigan 7, 79.

# KODAIKANAL OBSERVATORY BULLETIN NO. CLXI.

Page.	Table No.	Columns.	Date.	Read.	For.
3	1	5, 6, 7, 8	1st Quarter	3.43 6.88 46.46 3.11	3.54 6.81 46.48 3.10
3	1	5, 6, 7, 8	2nd Quarter	3.85 7.53 41.99 3.57	3.10 3.35 7.56 41.82
3	1	5, 6, 7, 8	1st half year	3.63 7.20 44.16 3.35	3.64 3.69 7.19 44.15

## PART - II.

Page No.	Date.	Column/Hour.	Read.	for.
11	20	11	Δ	Δ
11	20	13	Δ	Δ
11	21	11	Δ	Δ
11	21	13	Δ	Δ
11	22	11	Δ	Δ
11	22	13	Δ	Δ
11	23	11	Δ	Δ
11	23	11	Δ	Δ
13	23	11	Δ	Δ
15	28	2	36.9	35.0
16	6	14	36.3	36.3
17	18	3	33.9	33.0
17	Mean Range	11	0848	0748
20	8	15	5.6	5.4
22	10	2	35.7	35.9
23	11	10	565	551
43	28	7	496	494
44	Mean	11	2030	0230
		--	Mean +	Mean +

## PART - III.

76	20	Under 04	220	223
142	12	" 0930	L	C
142	13	" 0930	C	L
222	Count	" 0830	28	29
223	Count	" 1830	30	20
252	Count	" 06	26	2
255	4	Date	4	Nil
298	5	Under 1130	215	25
298	8	" 1130	215	2





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# Kodaikanal Observatory

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*Published on 5th December, 1963 (Agrahayana 14th, 1885)*



1. 2.

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1971). The concentration of chlorophyll was expressed as  $\mu\text{g mL}^{-1}$  of the sample.



the 1990s, the number of people in the world who are under 15 years of age is expected to increase by 1.5 billion, from 1.1 billion in 1990 to 2.6 billion in 2015. The number of people aged 65 and over is expected to increase by 1.1 billion, from 350 million in 1990 to 1.4 billion in 2015. The number of people aged 15-64 is expected to increase by 1.5 billion, from 2.5 billion in 1990 to 4.0 billion in 2015. The number of people aged 65 and over is expected to increase by 1.1 billion, from 350 million in 1990 to 1.4 billion in 2015. The number of people aged 15-64 is expected to increase by 1.5 billion, from 2.5 billion in 1990 to 4.0 billion in 2015.

the 1990s, the number of people in the world who are illiterate has increased from 1.2 billion to 1.5 billion. The number of illiterate people in the world is projected to reach 1.7 billion by the year 2015. The number of illiterate people in the world is projected to reach 1.7 billion by the year 2015.

*Journal of Management Studies*, 36(7), 809–826.

# Kodaikanal Observatory

Bulletin No. CLXI

## PART I

### *Summary of Prominence Observations for the first half of 1960*

The results of observations of prominences made at Kodaikanal Observatory during the first half of 1960 supplemented by data computed from photographs supplied by the Mount Wilson and Meudon Observatories for those days on which Kodaikanal had imperfect or no observations are summarised in this bulletin.

*Calcium prominences on the limb.*—During the half year under review, photographs of calcium prominences at the limb were obtained at Kodaikanal on 128 days which were counted as 126½ effective days after giving due weightage to the photographs according to their quality. Spectroheliograms for 23 days were obtained from Mount Wilson observatory and for 40 days from the Meudon Observatory. In all, complete observations were available for 166 effective days.

The mean daily areas (in sq. minutes of arc) and the mean daily numbers of prominences derived from the above records are given below:—

	Combined data	
	Mean daily areas (Square minutes)	Mean daily numbers
North . . . . .	2.08	4.04
South . . . . .	1.55	3.15
TOTAL . . . . .	3.63	7.19

These figures when compared with the corresponding values of the previous half year show a decrease of activity, the decrease in area being 41.5% and the decrease in number 21.4%.

The distribution of areas and numbers in five-degree ranges of latitude as obtained from the combined data is represented in diagram I.

In the northern hemisphere there are two peaks of activity in the latitude belts 20°—25° and 35°—48°; the maximum activity in the southern hemisphere is in the latitude range 25°—30° with a secondary maximum in the belt 55°—60°.

Mean Numbers

# DIAGRAM I

Mean Areas and Mean Numbers of Calcium Prominences

January - June 1960

Mean Areas - Full Line  
Mean Numbers - Broken Line

0.5  
0.4  
0.3  
0.2  
0.1  
0  
0.1  
0.2  
0.3  
0.4  
0.5

Mean Area ( $\frac{1}{10}$  Square minute of Arc)

NORTH

SOUTH

The monthly, quarterly and half-yearly areas, numbers, heights and extents of prominences as derived from all available photographs are tabulated below:—

1960 months	No. of effective days	Area (sq. mi- nutes)	Numbers	Daily means		Mean height	Mean Extent
				Area (Sq. mi- nutes)	Numbers		
January . . . . .	28½	106.70	207	3.78	7.33	46.08	2.97
February . . . . .	26½	92.10	179	3.78	6.55	47.04	3.20
March . . . . .	29½	90.85	195	3.05	6.55	46.33	3.38
April . . . . .	30	117.85	206	3.93	6.87	45.17	4.21
May . . . . .	25	75.05	180	3.00	7.20	38.11	3.17
June . . . . .	26½	120.50	228	4.55	8.60	42.17	2.56
First quarter . . . . .	84½	289.65	581	3.54	6.81	46.48	3.18
Second quarter . . . . .	81½	313.40	614	3.83	7.56	41.82	3.64
First half-year . . . . .	166	603.05	1195	3.69	7.19	44.15	3.41

The distribution of prominences about the sun's axis of rotation is given below:—

	East	West	Percentage East
1960 January—June			
Total areas (Sq. minutes) . . . . .	2717.5	3313.0	45.05%
Total numbers . . . . .	585	610	49%

#### *Observations with the Hale Spectrohelioscope*

Details of Doppler displacements in the H-alpha line observed in prominences and dark markings are given below:—

	North	South	East	West	Total	Displace- ments to red & vio- let
1	2	3	4	5	6	7
Displacements in prominences . . . . .	40	32	34	38	72	72
Displacements in dark-markings . . . . .	41	10	21	30	51	51

### Solar Flares

Details of solar flares observed during the period are given in the following table:—

Date 1960	Time in U.T.						Mean latitude	Mean longitude from central meridian	Impor- tance	Maximum width of H- alpha line observed A°
	Beg. h. m.	Max. h. m.	End h. m.							
1	2	3	4	5	6	7	8			
February 4	*08	45 08	45 08 58	10°N	37°W	1+	2.0			
February 20	*03	07 03	07 03 13	20°S	63°E	1	1.6			
March 29	*08	35 08	37 08 45	12°N	30°E	2	1.8			
April 1	02	42 02	47 03 00	11°N	02°W	1	1.7			
April 3(i)	*03	17 03	17 03 22	12°N	33°W	2	1.7			
April 3(ii)	05	42 05	44 05 52	12°N	35°W	1	1.6			
April 4	*02	18 02	21 02 34	12°N	50°W	2	1.4			
April 5	02	15 02	45 03 08	12°N	62°W	2	1.4			
April 29	02	09 04	04 05 05	10°N	22°W	3	2.0			
May 25	02	35 02	35 02 58	12°N	06°E	1	2.0			
June 10	05	10 05	20 05 25	31°N	56°W	2	1.7			

\*First observation of flare and not the beginning of flare.

### Surges, Active Prominences etc.

Details of surges, active prominences and eruptive prominences are given in the following table:—

Date	Pheno- menon	Impor- tance	Time in U.T.				Position (Heliographic)		Direction of out- flow	Remarks
			Beg.	End			Lat.	Long.		
14th Jan., 1960	EPL	1	03	32 05	00	20°N	90°E	r		Disappeared before 1100.
15th Jan., 1960	EPL	2	04	30 05	10	29°N	90°W	rs		
7th Feb., 1960	EPL	1	09	25 09	30	20°S	90°E	r		S
6th Mar., 1960	APR	2	03	32 04	15	05°N	90°E	r		Q
11th Apr. 1960	APR	1	05	37 06	15	05°S	90°E	r		J
14th Apr., 1960	EPL	2	03	55 04	15	30°N	90°W	r		T

Code:

DSD—Dark surge on disk;  
BSL—Bright surge at limb;  
APR—Active prominence region;  
BSD—Bright surge on disk;  
EPL—Eruptive prominence at limb.

### Sudden disappearances

Details of sudden disappearances of prominences and dark markings are given in the following table:—

1960 Date	Time when object last observed before activation (U.T.)		Time when disting- uation first observed (U.T.)		Time when object has dis- appeared (U.T.)		Approximate position of centre		Greatest extension of filament	Import- ance	Remarks	
							Lat.	Long.				
February 4	.	.	05	49	..	08	57	42°N	02°E	25°	3	The dark - marking was not seen on the spectroheliogram taken at 0857.
February 18	.	.	04	30	..	05	00	26°S	90°E	7°	1	Prominence was seen till 0430 hrs. At 0500 when obser- vation commenc- ed it was not seen.
March 24	.	.	03	10	0400	04	15	19°S	90°E	10°	1	The prominence ob- served till 0310 was found to have suddenly changed its shape at 0400 hrs. At 0415 hrs. it disappeared.

### Prominences projected on the disc as absorption markings

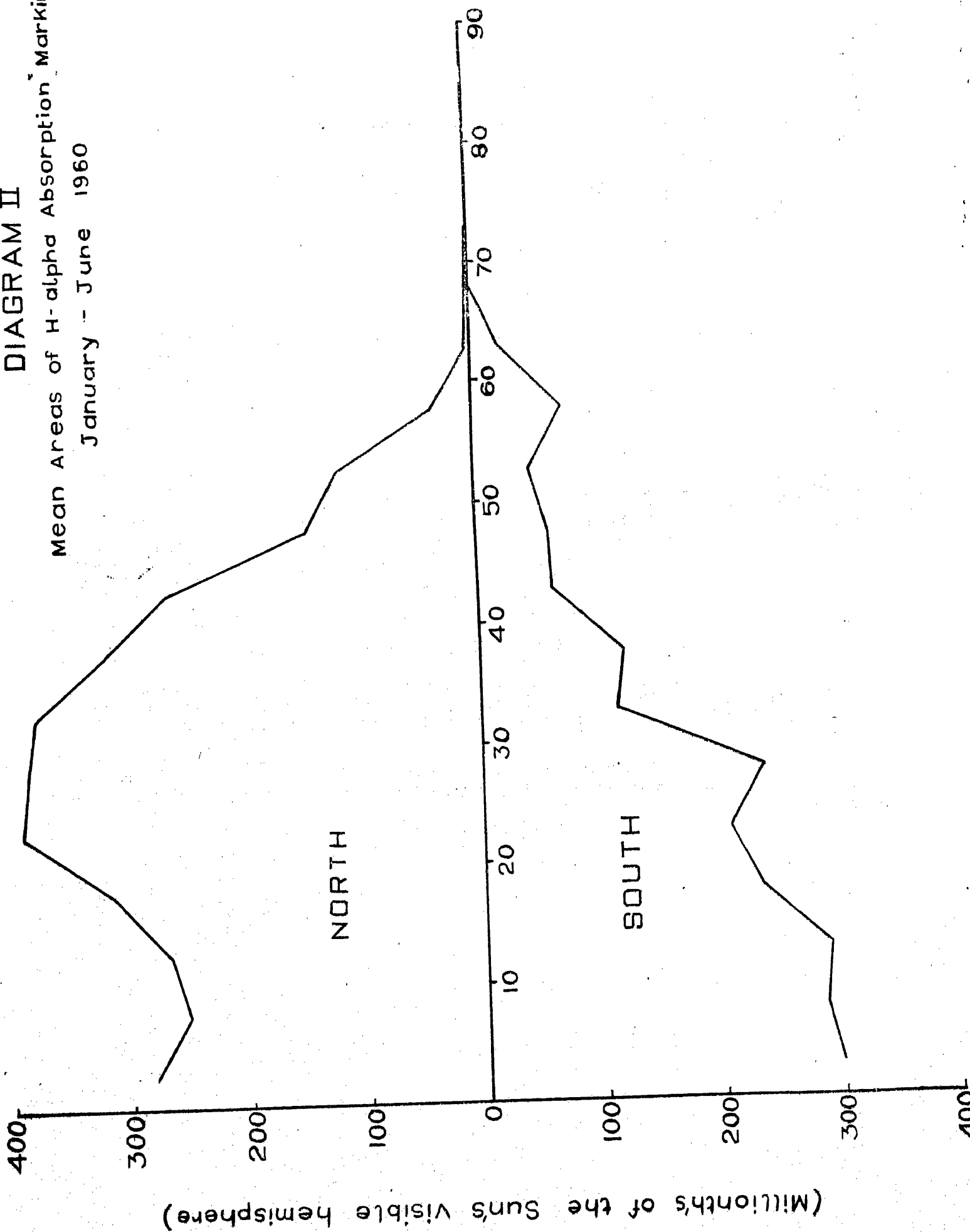
During the half-year under review photographs of the sun's disc in H-alpha line were obtained at Kodaikanal on 134 days. H-alpha spectroheliograms were also received for 24 days from Mount Wilson Observatory and for 33 days from Meudon Observatory. On the whole records were available for 174½ effective days.

The mean daily areas in millionths of the sun's visible hemisphere (uncorrected for foreshortening) and the mean daily numbers of the H-alpha dark markings as derived from the combined photographs are given below:—

### Combined data

		Combined data	
		Mean daily area (mil- lionths of the sun's visible hemisphere)	Mean daily number
North . . . . .		2958	18.62
South . . . . .		1951	14.04
TOTAL . . . . .		4909	32.66

DIAGRAM II  
 Mean Areas of H-alpha Absorption Marking  
 January - June 1960



On comparing with the previous half-year's values, the figures show a decrease in activity, the decrease being 16.7% in areas and 9.6% in numbers.

The distribution of the areas of the absorption markings in 5-degree ranges of latitude as obtained from the combined data is shown in diagram II.

The total area of darkmarkings in the northern hemisphere is considerably more than in the southern hemisphere, with a broad peak of activity in the latitude belt 25°—35°.

The distribution of total areas and numbers of the darkmarkings east and west of the sun's axis of rotation is given below:—

*January—June, 1960*

	Combined data		
	East	West	Percentage East
Total area (millionths of the sun's visible hemisphere)	4,48,531	4,81,250	48.2%
Total numbers	2,868	2,832	50.3%

#### *Summary of calcium flocculus observations*

During the half-year under review, calcium flocculus photographs were obtained at Kodaikanal on 130 days. Spectroheliograms for 32 days were obtained from Mount Wilson Observatory and for 40 days from Meudon Observatory. On the whole records were available for 171½ effective days.

The distribution of the areas of calcium flocculus east and west of the sun's axis of rotation is given below:—

*January—June, 1960*

	Combined data		
	East	West	Percentage East
Total area (in millionths of the sun's visible hemisphere)	19,25,687	20,38,875	48.6%

The mean daily areas in millionths of the sun's visible hemisphere (uncorrected for foreshortening) of the calcium flocculi as derived from the combined photographs are given below:—

	North	South	Total
Mean daily area (in millionths of the sun's visible hemisphere)	13,789	9,046	22,835

Compared to the previous half-year there is decrease in activity of 12.9%.

Thanks are due to the co-operating observatories for the photographs supplied by them.



## PART II

*Magnetic observations for the first-half of 1960*

Brief descriptions of the absolute instruments, the variometers and the system of observations are available in Bulletins Nos. CXXXII and CXXVI of this observatory. The data given in this Bulletin are derived mainly from the records of La Cour instruments, but in case of failure of La Cour records, Watson magnetograms have been used.

The adopted values of the scale coefficients for the Horizontal Force, Vertical Force and Declination magnetographs for the first half of 1960 were 29 $\gamma$ /cm., 120 $\gamma$ /cm. and 14'/cm. respectively.

## PART III

*Ionospheric Observations for the first-half of 1960*

A description of the system of ionospheric observations at Kodaikanal with a brief description of the Ionosphere Recorder has been given in Bulletin No. 146 of this observatory. The present Bulletin contains half-hourly values of eleven ionospheric parameters viz. foF2, foF1, foE, foEs, fbEs, f-min., h'F2, h'F, h'E, h'Es and (M3000) F2 with symbols and terminology as recommended by the Special Committee on World-wide Ionospheric Soundings to the URSI/AGI in its First Report (Brussels, September 2, 1956).

KODAIKANAL OBSERVATORY, }  
August, 1962.

M. K. VAINU BAPPU,  
Director,

**MAGNETIC DATA**

TABLE 1

## Hourly values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

January

2° plus tabular quantities

	Hours G.M.T.														
Date	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1†	36.7	37.5	38.4	38.6	38.6	38.5	38.1	38.1	36.3	34.9	34.6	35.0	36.1	36.4	36.0
2†	36.7	36.8	37.5	37.2	37.1	36.7	36.7	36.5	35.6	35.0	34.6	34.7	35.7	36.3	36.0
3	36.5	36.8	37.4	37.8	37.6	37.1	36.9	37.9	37.5	36.4	35.4	35.2	35.8	36.4	35.9
4	36.4	36.5	37.2	37.2	37.6	37.5	37.9	37.9	38.3	38.2	36.6	35.7	36.4	36.5	36.1
5	37.2	37.2	37.2	36.6	36.6	36.4	37.9	37.9	37.9	36.9	36.4	36.1	35.8	35.4	35.1
6	35.1	35.9	36.1	36.4	36.2	36.1	36.4	36.1	35.2	35.4	35.1	35.0	35.1	35.8	35.7
7	36.5	36.2	35.7	35.5	35.7	36.9	38.7	37.5	36.6	36.6	36.5	36.4	36.4	36.6	36.2
8	36.2	36.2	36.6	36.2	35.9	37.3	37.9	37.3	36.7	36.6	36.6	36.2	36.0	36.3	36.5
9†	36.6	36.6	37.3	37.4	37.3	38.6	39.4	39.4	38.6	37.6	36.5	35.8	36.0	36.5	36.3
10††	37.0	37.6	38.4	38.6	37.0	38.0	38.7	39.3	36.3	35.5	34.5	34.6	34.8	34.5	34.1
11††	36.7	37.2	37.6	37.6	36.9	36.6	37.0	37.3	36.3	36.3	35.1	35.5	35.9	35.5	35.2
12	36.9	37.6	38.0	37.3	36.6	36.6	37.7	36.9	35.2	35.2	35.5	36.2	35.8	35.3	35.2
13	36.7	37.4	37.9	37.9	36.9	36.7	37.3	37.0	36.5	36.0	35.6	35.6	36.5	36.5	36.0
14††	37.3	38.6	39.1	38.7	37.8	36.6	36.0	35.0	33.9	33.2	33.2	34.0	34.5	34.9	34.9
15††	36.1	38.0	38.9	38.8	37.4	36.1	36.4	36.0	34.6	33.5	33.6	34.3	35.3	35.6	35.3
16	36.4	36.7	37.1	37.3	36.8	37.5	38.1	38.1	36.8	35.4	34.7	35.2	36.0	36.1	35.6
17	36.7	37.0	37.1	37.0	37.1	37.5	37.3	37.7	36.8	36.0	35.4	35.9	36.0	36.6	36.3
18	37.5	37.7	38.2	38.9	38.2	38.9	39.3	38.5	37.6	34.3	32.0	31.8	33.0	35.3	35.4
19	36.8	37.2	37.2	37.6	37.8	38.3	39.2	38.2	36.8	35.8	35.4	35.4	35.4	35.7	35.5
20	36.9	37.1	37.5	37.6	38.1	38.3	39.2	38.9	39.2	37.8	36.8	35.5	36.1	36.4	35.8
21††	Δ	Δ	Δ	Δ	36.5	37.0	38.3	37.3	35.6	35.6	34.5	34.0	33.1	34.4	34.7
22	36.3	36.1	36.5	36.1	35.6	35.8	37.5	37.6	36.8	35.6	35.5	34.1	35.1	35.4	35.5
23	Δ	Δ	Δ	Δ	35.6	35.9	37.3	38.1	38.3	38.5	38.4	37.1	36.9	36.4	35.6
24	37.1	37.4	37.4	37.1	35.6	34.9	36.0	37.0	37.6	38.0	37.6	36.4	35.6	35.6	35.6
25	37.0	37.3	37.3	37.0	37.0	37.1	37.6	38.0	38.0	38.0	37.8	37.0	36.9	36.4	35.7
26	37.4	37.7	38.0	37.9	36.7	36.3	37.2	37.1	37.0	36.4	36.1	36.1	36.7	36.5	36.4
27	37.1	37.7	38.1	37.9	38.2	37.1	37.2	37.2	36.3	37.0	37.5	37.5	37.2	37.8	37.1
28	37.1	38.1	38.9	39.3	38.8	38.5	38.8	38.5	37.8	36.8	36.4	36.8	37.7	37.7	37.1
29	38.1	38.5	39.1	39.9	40.0	39.8	39.9	39.9	38.4	36.3	35.7	35.7	36.7	37.1	37.0
30†	37.1	38.4	39.2	39.8	39.5	39.3	39.5	38.4	36.8	35.7	35.1	35.4	36.1	37.0	37.0
31†	37.2	37.7	38.2	39.1	39.8	39.3	38.5	37.8	37.1	36.8	36.5	36.5	37.1	37.1	36.7
Mean	36.8	37.3	37.7	37.8	37.4	37.4	37.8	37.6	36.8	36.1	35.6	35.6	35.9	36.2	35.9
Mean†	36.9	37.4	38.1	38.4	38.5	38.5	38.4	38.0	36.9	36.0	35.5	35.5	36.2	36.7	36.4
Mean††	36.8	37.8	38.5	38.4	37.3	36.8	37.0	36.9	35.9	34.6	34.1	34.6	35.1	35.1	34.9

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record: (day omitted for means).

TABLE 1

## Hourly values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

January

2° plus tabular quantities

Hours G. M. T.										Maximum		Minimum		Range		Date
Mean																
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.		
										H. M.		H. M.				
36.0	36.1	36.3	36.1	36.0	35.8	36.1	36.3	36.4	36.6	06	00	39.2	10	00	34.6	1†
36.0	36.0	36.1	36.3	36.1	36.0	36.0	36.3	36.4	36.2	01	45	37.7	10	00	34.6	2†
36.2	36.1	36.2	36.1	36.1	35.9	35.1	35.2	35.2	36.4	07	00	37.9	11	00	34.2	3
36.4	36.4	36.5	36.5	36.5	36.6	36.8	36.9	37.1	36.9	08	35	38.9	10	45	35.5	4
35.0	35.0	35.0	35.0	35.1	35.1	35.2	35.2	35.0	36.1	05	50	38.0	14	19	34.7	5
35.8	35.9	35.1	35.1	35.1	35.2	35.1	35.1	35.2	35.6	06	10	36.5	11	00	35.0	6
36.2	36.5	36.5	36.4	36.1	36.1	36.1	36.4	36.4	36.4	05	54	39.2	03	12	35.4	7
36.5	36.6	36.6	36.6	36.5	36.5	36.5	36.5	36.6	36.6	05	34	38.0	03	39	35.2	8
36.5	36.5	36.3	36.6	36.6	36.5	36.5	36.5	36.6	37.0	06	00	39.4	10	58	35.6	9†
34.2	34.4	34.5	35.2	35.3	35.8	36.2	35.6	35.9	36.1	07	15	40.0	14	07	33.8	10††
35.8	35.3	35.3	35.6	35.9	36.0	36.0	36.3	36.6	36.2	02	17	38.0	09	04	34.4	11††
35.6	36.2	35.9	35.5	35.6	35.6	36.2	36.3	36.3	36.2	02	00	38.0	08	05	35.1	12
35.8	35.6	35.9	35.9	36.2	36.6	36.5	36.6	37.3	36.5	02	02	38.0	10	05	35.3	13
35.0	35.3	35.6	36.0	36.1	34.9	34.6	34.5	34.6	35.6	01	54	39.4	10	22	32.5	14††
35.4	35.3	35.4	35.4	35.4	35.7	35.6	35.6	36.0	35.8	02	58	39.5	08	50	33.3	15††
35.7	36.1	36.1	36.3	36.3	36.4	36.3	36.6	36.7	36.4	06	25	38.2	10	00	34.7	16
35.7	35.9	36.3	36.3	36.3	36.6	36.7	36.7	37.1	36.6	04	25	37.8	09	30	35.3	17
35.4	35.4	35.5	36.1	36.1	36.2	36.5	36.8	36.8	36.3	05	42	39.6	10	35	31.2	18
35.5	36.1	36.1	36.5	36.5	36.5	36.5	36.7	36.8	36.6	06	00	39.2	10	00	35.4	19
36.0	36.1	36.1	36.0	36.4	36.7	36.7	Δ	Δ	Δ	Δ	S	Δ	Δ	S	Δ	20
34.7	35.2	35.4	35.2	35.4	35.5	35.8	36.2	36.5	Δ	Δ	S	Δ	Δ	S	Δ	21††
35.5	35.5	35.5	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	S	Δ	Δ	S	Δ	22
35.7	35.9	36.3	36.7	36.3	36.6	36.9	36.9	37.0	Δ	Δ	S	Δ	Δ	S	Δ	23
35.6	35.6	35.7	36.0	36.3	36.6	36.7	37.0	37.0	36.5	09	20	38.4	04	45	34.3	24
35.7	35.9	36.0	36.4	36.4	36.3	36.6	36.9	37.0	36.9	06	55	38.1	14	20	35.6	25
36.4	36.4	36.4	36.4	36.7	36.7	36.7	36.8	37.0	36.8	02	00	38.0	10	00	36.1	26
36.8	36.5	36.7	36.7	36.7	36.7	36.7	36.7	36.8	37.1	03	45	38.4	07	00	35.8	27
37.1	37.1	37.1	37.1	37.1	37.4	37.2	37.4	37.8	37.6	02	55	39.5	10	00	36.4	28
36.8	36.7	36.7	36.5	36.5	36.5	36.5	36.8	37.0	37.6	03	35	40.2	10	58	35.6	29
36.7	36.8	36.8	36.8	36.7	36.7	36.8	37.0	37.1	37.3	03	05	39.9	09	50	35.0	30†
36.7	36.4	36.5	36.5	36.5	36.8	37.0	37.1	37.1	37.3	04	22	39.9	16	00	36.4	31†
35.9	36.0	36.0	36.1	36.2	36.2	36.2	36.4	36.5	36.6						3.8	Mean
36.4	36.4	36.4	36.5	36.4	36.4	36.5	36.6	36.7								Mean†
35.1	35.1	35.2	35.2	35.7	35.6	35.6	35.5	35.8								Mean††

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 2

## Hourly values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

February

2° plus tabular quantities

February

	Hours G. M. T.														
Date	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
1	37.2	37.2	37.5	38.8	39.8	39.9	40.2	40.0	38.5	37.2	36.8	36.0	35.8	36.4	35.8
2	37.5	37.2	37.0	37.8	38.4	38.5	39.6	39.8	39.5	38.4	37.5	36.8	36.8	37.0	37.0
3	36.1	36.7	37.0	37.8	38.5	38.9	39.6	39.6	39.5	38.2	36.8	35.6	35.8	36.5	36.1
4	35.7	36.1	36.8	37.8	38.8	39.3	39.3	39.9	38.4	37.2	36.5	36.5	36.4	36.7	36.3
5	37.1	37.0	37.0	37.1	37.1	37.1	37.2	37.1	36.8	36.0	36.7	35.8	35.8	37.0	36.4
6	35.7	35.7	36.7	36.8	37.2	37.9	37.9	37.2	37.4	37.2	37.2	36.8	36.5	36.8	36.3
7†	37.4	37.9	38.6	38.1	37.2	37.1	37.5	38.4	38.4	37.5	37.1	37.0	36.3	36.3	35.8
8	37.8	37.8	37.9	38.6	39.2	39.5	38.9	38.6	38.5	37.9	37.2	37.1	37.1	37.4	37.2
9†	38.5	38.5	38.8	38.9	38.6	38.9	39.5	39.9	38.6	39.8	38.6	38.5	38.5	38.2	37.2
10†	38.4	38.5	38.8	39.2	38.6	38.7	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
11	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	37.1	37.1	37.1	37.2	36.6
12	37.1	37.3	38.3	39.2	38.7	38.7	39.4	39.3	37.9	37.2	37.1	37.1	37.1	37.5	37.2
13	37.9	38.0	38.5	38.6	38.8	39.0	40.0	39.3	38.5	37.3	36.4	36.2	36.9	37.3	37.2
14††	37.3	36.6	38.3	38.5	38.0	37.7	37.7	37.2	36.9	35.9	35.9	35.9	35.9	36.6	35.8
15	37.2	37.2	38.2	37.9	38.2	38.9	39.0	39.0	38.3	37.2	36.8	36.2	36.6	36.8	36.2
16††	37.2	37.2	37.3	37.3	36.9	37.3	37.9	38.2	37.5	37.2	36.6	36.4	36.5	36.9	36.8
17††	38.2	38.2	38.9	39.4	39.7	40.3	41.1	40.3	39.7	38.6	37.5	36.4	35.9	36.4	36.2
18††	36.1	35.8	35.9	36.4	38.0	38.7	39.3	38.9	38.6	38.5	37.2	35.9	35.5	35.7	35.9
19	37.2	37.2	37.3	38.1	38.7	39.7	40.2	40.1	39.5	38.6	37.3	36.9	36.6	36.3	36.7
20	37.0	36.7	36.6	36.5	37.3	37.9	38.7	39.4	39.4	37.3	37.0	36.3	36.2	36.3	35.9
21††	37.0	37.0	37.0	36.7	36.9	36.5	38.0	37.3	37.2	37.3	36.7	35.2	35.6	35.9	35.8
22	37.2	37.3	37.4	36.7	36.5	37.2	38.4	38.7	38.4	38.1	37.0	36.2	36.3	36.9	36.7
23	37.3	37.3	37.2	36.5	36.3	37.0	37.4	37.7	37.6	37.6	37.2	36.7	36.9	36.9	36.7
24†	37.2	37.2	37.4	37.4	37.4	37.4	38.3	38.7	38.6	38.6	38.0	37.2	36.9	37.2	36.9
25†	37.3	37.3	37.2	36.7	36.6	37.3	38.7	39.2	39.2	39.1	38.4	37.8	37.1	37.0	37.1
26	37.3	37.4	37.1	36.8	37.0	37.3	38.0	38.7	38.5	38.0	37.8	38.0	37.8	37.7	37.4
27	37.7	37.8	37.7	37.4	37.1	37.1	37.1	38.1	38.4	38.1	37.5	36.8	36.3	36.8	36.4
28	37.4	37.1	37.0	36.8	37.2	37.6	38.9	39.5	38.9	38.5	37.4	36.5	36.4	36.9	36.8
29	37.1	36.9	36.9	36.5	37.1	37.5	38.5	39.3	39.3	38.8	37.5	36.9	36.8	36.8	36.8
Mean	37.2	37.2	37.5	37.6	37.8	38.2	38.8	38.9	38.4	37.8	37.2	36.6	36.5	36.8	36.5
Mean†	37.6	37.7	38.0	37.8	37.5	37.7	38.5	39.1	38.7	38.8	38.0	37.6	37.2	37.2	36.8
Mean††	37.2	37.0	37.5	37.7	37.9	38.1	38.8	38.4	38.0	37.5	36.8	36.0	35.9	36.3	36.1

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 2

## Hourly values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

February

2° plus tabular quantities

Hours G. M. T.										Maximum		Minimum		Range		Date
Mean																
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.		
										H. M.		H. M.				
36.1	36.5	36.8	36.8	37.0	37.0	37.1	37.4	37.4	37.5	06 10	40.3	13 50	35.7	4.6	1	
36.4	36.5	36.5	35.7	35.6	35.6	35.6	35.6	35.7	37.2	07 00	39.8	19 00	35.3	4.5	2	
36.1	36.4	36.1	35.8	35.7	36.0	36.4	35.8	35.6	36.9	08 00	39.8	11 05	35.4	4.4	3	
36.1	36.4	36.4	36.3	36.4	35.8	35.7	36.3	36.7	37.0	06 54	40.2	00 01	35.7	4.5	4	
35.7	35.7	35.7	35.7	35.7	35.6	35.8	35.7	35.7	36.4	06 12	37.4	19 25	35.3	2.1	5	
36.3	36.3	36.4	36.0	36.1	36.3	36.3	36.5	37.1	36.7	05 08	38.2	00 35	35.6	2.6	6	
35.8	36.1	36.4	36.8	36.8	37.0	37.0	37.1	37.4	37.1	02 43	39.1	14 00	35.8	3.3	7†	
37.1	37.1	37.4	37.2	37.1	37.2	37.4	37.7	38.2	37.8	04 54	39.9	11 00	37.1	2.8	8	
37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.4	37.8	38.2	07 00	39.9	15 00	37.1	2.8	9†	
Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	10†	
36.6	36.8	36.6	36.2	36.4	36.4	35.8	35.7	36.4	Δ	Δ	Δ	Δ	Δ	Δ	11	
37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.3	37.8	37.7	06 00	39.6	10 00	37.1	1.5	12	
37.2	37.2	37.8	37.5	37.5	36.5	36.2	36.5	36.5	37.6	06 00	40.0	10 12	35.8	4.2	13	
35.8	36.2	36.6	36.5	36.2	37.1	36.8	36.9	37.1	36.8	03 00	38.5	14 15	35.5	3.0	14††	
35.9	36.1	36.5	36.8	36.6	36.9	37.1	37.2	37.2	37.3	05 15	39.3	14 30	35.8	3.5	15	
35.7	36.6	36.9	37.2	37.2	37.3	37.3	37.3	37.8	37.1	06 43	38.3	14 57	35.2	3.1	16††	
36.1	36.9	36.9	36.5	36.2	36.1	36.1	35.7	36.1	37.6	06 20	41.4	21 58	35.1	6.3	17††	
36.6	36.2	36.6	36.9	36.8	36.9	37.2	37.2	37.2	37.0	06 05	40.0	12 40	35.4	4.6	18††	
36.6	36.5	37.0	37.2	36.9	36.3	37.2	37.2	36.9	37.6	06 25	41.1	19 15	36.0	5.1	19	
36.2	36.2	36.6	36.7	36.9	36.9	37.0	37.0	37.2	37.1	06 43	39.5	14 00	35.9	3.6	20	
35.9	36.3	37.0	36.9	37.0	37.2	37.3	37.2	37.0	36.7	05 58	38.3	11 00	35.1	3.2	21††	
36.7	35.9	37.0	37.2	37.0	37.0	37.2	37.3	37.3	37.2	06 25	38.8	11 00	36.0	2.8	22	
36.3	36.5	36.6	36.9	36.9	36.9	36.9	37.0	37.0	37.0	06 25	38.0	04 00	36.3	1.7	23	
36.9	37.0	37.2	37.0	36.9	37.0	36.9	37.2	37.3	37.4	07 00	38.7	12 00	36.9	1.8	24†	
37.3	37.4	37.3	37.4	37.3	37.0	37.0	37.3	37.4	37.6	06 25	39.4	03 00	36.4	3.0	25†	
37.3	37.1	37.1	37.3	37.1	37.1	37.4	37.5	37.5	37.5	06 25	38.8	03 00	36.8	2.0	26	
36.4	36.4	36.4	36.8	37.0	37.0	37.1	37.1	37.4	37.2	06 52	38.7	11 32	36.0	2.7	27	
36.8	36.8	37.1	37.1	36.9	36.9	37.1	37.2	37.2	37.3	07 13	39.9	11 30	36.2	3.7	28	
36.7	36.5	36.7	36.5	36.8	36.8	36.5	36.5	37.1	37.2	07 11	39.7	03 00	36.5	3.2	29	
36.5	36.6	36.8	36.8	36.7	36.7	36.8	36.9	37.1	37.2						3.4	Mean
36.8	36.9	37.0	37.1	37.0	37.0	37.0	37.3	37.5							Mean†	
36.0	36.4	36.8	36.8	36.7	36.9	36.9	36.9	37.0							Mean††	

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 3

## Hourly values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

March

2° plus tabular quantities

		Hours G. M. T.														
Date		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
		/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
1		37.1	36.4	36.0	35.5	36.1	37.3	37.7	38.9	39.4	38.6	38.3	37.5	37.3	36.9	36.5
2††		36.1	35.8	35.5	35.5	36.1	36.3	37.2	38.6	38.6	37.5	37.2	36.5	36.2	36.1	35.9
3††		36.2	35.9	36.1	35.8	35.9	36.9	36.6	38.6	38.7	38.0	37.5	37.3	36.9	36.2	35.9
4		36.3	36.2	36.2	36.0	36.2	36.3	37.6	38.7	38.7	38.5	37.7	37.4	37.0	36.4	36.2
5		36.4	36.3	36.2	36.2	36.3	37.3	38.0	38.7	38.7	37.8	37.7	37.7	37.7	37.6	37.3
6		37.3	37.6	37.3	37.3	37.6	37.8	38.8	39.2	39.1	38.3	37.3	36.9	36.9	36.6	36.4
7†		37.6	37.3	36.6	36.3	36.4	36.8	38.2	39.3	40.2	40.0	38.8	38.1	37.8	37.5	37.4
8		38.1	38.1	37.8	37.4	36.7	37.4	37.8	38.8	39.2	39.2	38.4	37.4	36.5	36.3	36.3
9		38.2	37.8	37.7	37.0	36.4	37.2	37.8	38.4	39.2	39.1	37.7	37.0	36.5	36.5	36.8
10		38.1	38.2	38.1	38.0	37.7	37.8	39.0	39.4	40.2	39.0	37.0	37.3	36.6	36.4	36.6
11††		37.7	38.0	38.1	38.3	37.8	37.7	37.7	38.4	38.5	38.0	37.6	36.6	36.0	36.4	36.3
12		37.3	37.1	36.6	36.3	36.2	36.7	37.6	37.3	37.3	36.9	36.6	36.4	36.4	36.6	36.4
13†		Δ	Δ	Δ	Δ	36.7	37.8	38.4	40.6	41.1	40.5	39.1	37.8	37.6	37.4	37.1
14		37.4	37.6	37.1	36.8	36.9	37.3	38.0	39.1	40.3	40.3	38.7	37.7	37.6	37.6	37.5
15		37.6	37.6	37.2	36.2	36.2	37.5	39.0	40.0	40.3	40.0	38.3	37.6	37.6	38.0	37.6
16††		35.8	35.6	35.4	35.9	36.1	36.2	35.8	34.9	36.1	35.9	35.9	35.8	35.8	35.5	35.9
17		37.2	37.2	37.5	36.8	36.3	36.6	37.3	37.7	38.2	37.3	36.6	36.2	36.2	36.6	36.2
18		37.3	37.7	37.2	37.1	37.1	37.4	37.8	38.5	38.9	38.6	37.5	36.9	36.5	36.7	36.9
19		37.5	37.5	37.1	36.7	36.5	36.8	37.5	38.6	38.9	38.5	37.5	36.9	36.5	36.5	36.2
20†		37.5	37.4	37.2	37.2	37.2	37.6	38.2	39.0	39.7	39.0	38.5	37.9	37.5	37.4	37.2
21		37.6	37.6	37.4	37.2	37.5	37.6	37.8	37.9	38.5	38.1	37.5	37.4	37.5	36.9	36.7
22†		37.5	37.2	37.1	37.1	37.8	38.4	38.4	38.7	38.8	38.4	38.0	37.3	36.8	37.0	36.8
23†		37.4	37.4	37.4	37.3	37.3	37.3	37.7	37.8	37.7	37.1	36.3	36.0	36.3	36.8	37.3
24		38.1	37.8	37.7	38.0	38.8	38.8	38.9	39.9	39.2	38.8	37.5	37.3	37.4	37.4	37.5
25		37.3	37.1	36.8	36.6	37.0	37.4	38.7	39.2	39.8	39.1	37.8	37.0	36.8	37.0	37.0
26		37.5	37.5	37.5	38.0	38.7	38.9	39.9	39.8	39.1	38.4	37.4	37.4	37.5	37.5	37.3
27		37.4	37.3	36.8	37.0	37.4	38.1	39.5	39.9	39.4	38.5	37.8	37.5	37.8	38.1	37.8
28		37.4	37.4	36.7	36.4	37.1	38.4	39.8	40.3	40.3	39.9	38.5	37.4	37.4	37.8	37.7
29		37.3	36.7	36.0	35.9	36.1	37.4	38.4	39.3	38.8	37.7	37.3	37.1	37.5	37.8	37.7
30		37.1	37.4	37.1	36.4	36.8	38.2	38.9	40.2	39.8	38.7	37.0	36.0	36.4	36.9	37.4
31††		36.1	35.9	35.7	36.3	37.5	38.9	39.2	39.6	38.8	37.5	37.1	37.4	35.3	36.3	38.5
Mean		37.2	37.2	36.9	36.8	36.9	37.5	38.2	38.8	39.0	38.4	37.6	37.1	36.9	36.9	36.9
Mban†		37.5	37.3	37.1	37.0	37.2	37.5	38.1	38.7	39.1	38.6	37.9	37.3	37.1	37.2	37.2
Mean††		36.4	36.2	36.2	36.4	36.7	37.2	37.3	38.0	38.1	37.4	37.1	36.7	36.0	36.1	36.5

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 3

## Hourly Values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

March

2° plus tabular quantities

Hours G. M. T.										Maximum		Minimum		Range	Date
Mean															
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
										H. M.		H. M.			
36.6	36.5	36.3	36.2	36.1	36.3	36.2	36.2	36.2	36.9	07 28	39.7	03 10	35.2	4.5	1
36.1	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.4	07 30	39.0	03 10	35.4	3.6	2††
35.5	35.8	36.1	36.1	36.2	36.2	36.3	36.2	36.2	36.5	07 55	39.0	14 55	35.4	3.6	3††
36.2	35.9	35.9	35.7	36.0	36.3	36.3	36.3	36.4	36.7	07 00	38.8	17 35	35.6	2.2	4
37.0	36.9	37.0	37.0	36.7	36.7	36.7	37.1	37.3	37.2	07 00	39.0	02 25	36.0	3.0	5
															6
36.4	36.6	36.6	36.6	36.9	37.3	37.1	37.3	37.4	37.4	07 00	39.2	14 00	36.4	2.8	7†
37.2	37.2	37.4	37.4	37.4	37.4	37.5	37.7	37.8	37.7	08 00	40.2	03 10	36.1	4.1	8
36.3	36.1	36.4	36.5	36.7	37.0	37.4	37.8	37.8	37.4	08 28	39.5	15 23	35.8	3.7	9
36.4	36.5	37.1	37.1	37.2	37.2	37.4	37.7	37.9	37.4	08 00	39.2	04 08	36.3	2.9	10
36.3	36.2	36.2	36.3	36.0	36.3	37.0	37.3	37.4	37.4	07 50	40.5	18 40	35.9	4.6	
															11††
36.3	36.4	35.9	35.9	36.0	36.3	36.6	36.7	37.0	37.1	07 10	38.7	17 28	35.3	3.4	12
36.4	36.4	36.4	36.4	36.4	36.7	37.0	37.6	37.7	36.8	23 00	37.7	04 02	36.0	1.7	13†
36.7	36.7	36.7	37.1	37.3	36.9	37.3	37.4	37.6	Δ	Δ	Δ	Δ	Δ	Δ	14
37.6	37.6	37.6	37.6	37.6	37.5	37.2	37.3	37.5	37.8	08 10	40.4	03 10	36.6	3.8	15
37.2	36.9	36.2	35.9	35.8	35.8	35.8	35.6	35.8	37.3	08 00	40.3	23 32	35.2	5.1	
															16††
36.3	36.3	35.8	36.1	35.9	36.1	36.6	36.5	37.3	36.0	05 15	37.9	02 15	34.9	3.0	17
36.2	36.1	36.5	36.5	36.6	36.6	36.9	37.0	37.2	36.8	07 56	38.4	16 03	35.9	2.5	18
37.1	36.8	36.9	37.1	37.1	36.8	37.1	37.1	37.4	37.3	08 00	39.3	12 00	36.5	2.8	19
36.2	36.2	36.7	37.1	37.1	37.2	37.2	37.5	37.5	37.2	07 45	39.0	16 05	36.1	2.9	20†
37.2	37.2	37.2	37.4	37.5	37.4	37.5	37.6	37.6	37.7	07 36	39.9	03 10	37.1	2.8	
															21
37.1	37.1	37.4	37.1	37.2	37.2	37.2	37.4	37.5	37.4	08 07	38.8	13 38	36.5	2.3	22†
37.3	37.3	37.3	37.4	37.4	37.3	37.4	37.4	37.4	37.6	07 49	38.9	02 00	36.8	2.1	23†
37.3	37.4	37.4	37.4	37.4	37.3	37.4	37.8	38.2	37.3	23 00	38.2	10 35	35.9	2.3	24
37.5	37.0	37.0	37.3	37.4	37.5	37.4	37.4	37.4	37.9	07 00	40.2	16 28	36.7	3.5	25
37.1	37.1	37.3	37.3	37.0	37.0	37.1	37.4	37.4	37.5	08 00	39.8	03 10	36.4	3.4	
															26
37.4	37.4	37.4	37.1	37.3	37.3	37.1	37.4	37.4	37.8	06 30	40.2	18 00	37.1	3.1	27
38.0	37.7	37.5	37.4	37.4	37.4	37.4	37.4	37.4	37.8	06 45	40.1	02 30	36.3	3.8	28
37.7	37.1	36.4	37.8	37.1	37.1	37.4	37.5	37.4	37.8	07 20	40.6	16 30	36.2	4.3	29
37.5	37.5	37.5	37.3	37.1	37.3	37.3	37.4	37.4	37.4	07 16	40.2	03 20	35.7	4.5	30
37.0	36.8	36.1	36.1	36.0	35.9	35.9	36.0	36.1	37.1	07 00	40.2	21 15	35.6	4.6	
															31††
38.5	37.4	35.7	34.9	34.5	34.2	33.2	31.8	28.9	36.2	06 25	40.1	22 40	28.2	11.9	
															Mean
36.9	36.8	36.7	36.7	36.7	36.8	36.8	36.9	36.9	37.2						Mean†
37.2	37.3	37.3	37.4	37.4	37.4	37.4	37.6	36.2							
36.5	36.4	35.9	35.8	35.8	35.8	35.8	35.5	35.1							

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).



TABLE 4

## Hourly Values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

April

2° plus tabular quantities

	Hours G. M. T.														
Date	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1††	28.3	30.4	32.5	34.2	34.0	37.5	37.3	37.4	38.7	38.7	37.3	36.7	35.7	34.1	31.8
2	31.9	32.8	33.9	35.9	37.3	38.4	38.8	38.8	37.5	36.4	34.6	33.2	33.2	33.2	35.2
3††	35.9	34.7	33.3	34.7	35.3	35.0	34.9	34.3	35.6	37.0	37.3	36.8	36.1	36.0	35.7
4	34.6	34.6	34.3	34.7	35.6	36.1	37.3	38.2	38.2	37.4	36.1	35.6	35.4	35.4	35.6
5	35.7	35.7	35.0	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
6	35.1	35.0	33.0	33.9	34.7	35.3	37.5	38.8	38.8	37.7	36.8	35.7	35.6	35.6	35.6
7	35.7	34.7	34.3	33.8	34.3	34.7	36.6	37.5	38.0	37.3	36.4	36.0	36.0	36.0	36.0
8	35.7	34.6	33.6	34.0	34.3	36.0	37.5	38.0	37.4	36.7	36.0	35.9	35.6	36.1	36.0
9†	36.0	35.6	35.0	36.0	36.8	36.1	38.5	38.6	38.6	37.2	36.5	36.1	36.1	36.1	36.1
10	36.2	36.0	35.4	35.9	37.5	38.9	39.0	39.6	39.0	38.0	37.2	36.2	36.1	35.2	35.8
11	35.9	35.6	34.8	34.9	35.6	36.3	37.3	37.7	37.6	36.9	36.0	36.0	35.6	36.0	36.3
12	36.7	36.3	36.3	37.0	37.5	38.2	38.5	39.2	37.6	37.7	37.1	36.5	36.3	35.3	35.7
13	35.7	35.0	35.0	36.0	37.7	39.1	38.9	38.8	38.1	37.8	37.5	37.2	36.7	36.5	36.5
14	35.8	36.0	35.3	35.4	36.5	36.9	38.2	38.3	38.3	38.0	37.1	35.7	35.2	35.8	36.4
15	36.5	35.5	34.8	35.3	36.5	38.0	38.3	38.4	38.4	38.3	37.6	36.6	36.5	36.6	36.7
16	36.6	36.2	35.3	35.9	36.8	37.7	38.4	39.4	39.4	39.1	38.4	37.5	36.7	35.6	35.3
17	36.7	35.6	35.2	35.5	36.5	38.3	39.3	39.5	39.3	38.3	38.3	37.2	37.1	36.9	36.8
18	36.4	35.4	34.4	35.1	35.8	36.8	38.1	38.1	38.3	38.6	38.1	36.8	36.5	36.7	36.8
19†	36.7	36.0	35.5	36.3	36.9	38.0	39.9	39.4	39.6	39.4	38.6	37.7	36.9	36.6	36.9
20†	36.8	36.2	35.6	36.6	37.6	38.6	39.8	40.8	40.8	39.8	39.0	38.2	36.9	36.8	36.9
21†	36.6	35.5	35.1	35.5	36.7	37.3	38.5	39.4	39.5	38.5	38.1	37.6	37.3	37.3	37.4
22†	37.0	36.6	35.9	36.3	37.1	37.8	38.7	39.8	39.7	38.5	37.4	37.0	37.0	37.0	37.1
23	37.0	36.3	35.6	36.5	37.8	39.2	41.0	41.2	40.5	39.3	38.5	37.4	37.2	37.4	37.8
24††	37.1	36.4	36.3	34.0	35.4	35.7	37.5	38.6	38.6	38.1	37.0	36.5	35.8	35.6	35.6
25	35.4	35.0	33.9	34.3	35.7	36.6	37.1	37.2	37.9	37.2	36.8	36.1	35.5	35.2	35.5
26	36.9	36.1	35.8	35.9	36.8	37.5	38.7	39.0	38.6	37.3	37.2	36.5	36.2	36.4	36.5
27	35.8	35.4	35.2	36.5	37.6	39.3	40.2	41.1	40.1	39.0	37.9	37.3	37.2	37.2	36.9
28††	33.5	31.6	29.3	32.3	34.4	37.2	39.3	39.7	38.8	37.0	34.5	34.1	34.2	34.2	34.9
29	35.9	35.9	35.5	36.2	38.6	38.6	39.3	40.0	38.8	38.4	37.2	37.2	35.9	36.3	37.2
30††	37.3	Δ	Δ	Δ	37.2	38.6	39.7	40.5	40.2	40.1	39.8	38.7	38.8	37.3	35.9
Mean	35.7	35.2	34.7	35.3	36.3	37.3	38.4	38.8	38.6	38.0	37.2	36.5	36.1	36.0	36.1
Mean†	36.6	36.0	35.4	36.1	37.0	37.6	39.1	39.6	39.6	38.7	37.9	37.3	36.8	36.8	36.9
Mean††	33.7	33.3	33.0	33.8	34.8	37.2	37.2	37.5	37.9	37.7	36.5	36.0	35.4	35.0	34.5

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 4

## Hourly Values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

April

2° plus tabular quantities

Hours G. M. T.										Maximum		Minimum		Range	Date		
Mean																	
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.				
										H. M.		H. M.					
31.9	30.8	31.4	33.3	31.8	32.2	31.4	33.2	31.9	33.9	08	22	41.5	00	07	26.3	15.2	1††
35.6	35.6	35.6	35.3	35.2	34.9	35.0	35.0	35.4	35.4	06	36	39.2	01	00	31.8	7.4	2
35.7	35.6	35.4	35.4	34.7	34.6	34.7	35.0	34.6	35.3	08	58	37.4	01	35	32.8	4.6	3††
35.6	35.3	35.0	35.0	35.3	35.6	35.7	35.7	35.9	35.8	07	08	38.4	04	07	34.0	4.4	4
Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	5
35.6	35.7	36.0	36.0	36.0	36.0	35.9	35.6	35.6	35.9	07	20	39.1	02	30	33.8	5.3	6
36.0	35.7	35.3	34.6	34.3	34.9	35.7	36.0	35.9	35.7	07	16	38.1	03	15	33.6	4.5	7
36.0	36.0	35.6	35.7	35.9	35.9	35.7	35.9	36.0	35.8	06	16	38.8	01	50	33.3	5.5	8
36.1	36.1	36.1	36.1	36.0	36.0	36.0	36.1	36.1	36.4	07	00	38.6	01	45	34.7	3.9	9†
36.2	36.2	36.2	36.1	36.2	36.1	35.4	35.4	35.4	36.6	06	47	40.4	13	08	34.9	5.5	10
36.3	36.2	36.0	35.9	35.9	35.7	36.0	36.3	36.6	36.1	07	00	37.7	02	00	34.4	3.3	11
36.3	36.1	36.0	35.8	35.7	35.8	35.7	35.8	36.1	36.6	06	45	40.5	13	20	35.0	5.5	12
36.5	36.5	36.3	36.1	36.0	36.0	35.7	35.7	35.7	36.7	05	45	39.8	01	25	34.9	4.9	13
36.5	36.5	36.5	36.5	36.4	36.4	36.4	36.5	36.6	36.6	07	22	38.5	11	40	35.1	3.4	14
36.9	36.6	36.6	36.6	36.6	36.5	36.5	36.5	36.5	36.8	07	15	39.5	02	07	34.5	5.0	15
35.0	34.6	35.0	35.3	35.4	35.6	36.0	36.3	36.6	36.6	07	00	39.4	15	15	34.5	4.9	16
37.1	36.9	36.8	36.1	35.5	35.4	35.5	35.5	36.0	36.9	06	35	39.6	02	00	35.2	4.4	17
36.5	36.1	36.2	36.2	36.0	36.4	36.4	36.5	36.7	36.6	07	48	38.8	01	33	34.3	4.5	18
36.9	36.9	36.9	36.8	36.6	36.6	36.6	36.8	36.8	37.3	08	00	39.6	02	00	35.5	4.1	19†
37.0	37.0	36.9	36.9	36.9	36.8	36.8	36.9	36.9	37.6	07	35	41.1	02	00	35.6	5.5	20†
37.6	37.6	37.4	37.1	37.0	37.0	37.0	37.0	37.0	37.3	07	30	39.7	01	52	34.7	5.0	21†
37.3	37.1	37.1	37.0	37.1	37.0	37.0	37.1	37.0	37.4	07	00	39.8	01	55	35.7	4.1	22†
37.9	37.8	37.8	37.2	37.2	37.4	37.4	37.2	37.1	37.9	06	12	41.3	02	00	35.5	5.8	23
35.7	35.7	35.7	35.4	35.0	34.6	35.0	35.6	35.7	36.1	07	12	39.1	03	00	33.3	5.8	24††
35.8	35.5	35.5	35.5	35.1	35.2	35.7	35.8	36.4	35.8	07	52	38.3	01	10	33.2	5.1	25
36.1	35.8	35.8	35.8	35.7	35.4	35.7	35.8	35.9	36.6	06	40	39.3	20	00	35.4	3.9	26
36.9	36.3	36.3	35.9	35.9	35.8	34.1	33.1	33.1	36.8	06	35	41.4	23	00	32.8	8.6	27
35.6	35.2	35.1	34.6	34.8	35.8	35.8	35.9	35.8	35.2	06	35	40.2	02	00	28.9	11.3	28††
37.3	37.3	37.2	37.3	37.0	36.7	36.9	36.7	36.7	37.3	06	50	40.1	01	48	35.3	4.8	29
34.9	36.2	34.2	34.1	31.8	31.7	31.6	32.7	33.1	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	30††
36.2	36.1	36.0	35.9	35.7	35.8	35.8	35.9	35.9	36.4						5.4	Mean	
37.0	36.9	36.9	36.8	36.7	36.7	36.7	36.8	36.8							Mean†		
34.7	34.3	34.4	34.7	34.1	34.3	34.2	34.9	34.5							Mean††		

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 5

## Hourly Values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

May

2° plus tabular quantities

		Hours G. M. T.														
Date		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1††		33.1	32.8	33.9	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
2		36.6	36.0	35.9	36.6	38.0	39.8	41.2	41.6	41.5	40.7	40.1	38.7	37.4	36.7	37.0
3		37.3	37.1	36.4	36.0	35.9	36.2	37.4	38.4	38.1	37.4	37.3	37.2	37.3	37.2	37.2
4†		37.4	37.2	37.2	37.6	38.8	40.1	40.7	40.1	39.1	38.3	37.4	37.3	37.3	37.4	38.0
5		37.7	36.9	36.2	37.0	38.6	39.5	40.1	40.1	39.3	38.7	38.7	38.6	37.9	37.6	38.0
6††		37.4	Δ	Δ	Δ	39.7	40.2	41.4	41.5	41.8	41.4	40.1	38.7	37.6	37.3	37.3
7††		36.6	35.9	36.0	36.3	37.3	39.4	40.5	41.6	42.2	41.5	39.7	38.6	38.7	38.4	37.2
8††		37.0	36.0	35.9	36.6	37.3	37.4	39.7	39.7	39.3	38.7	34.8	37.2	38.3	36.8	35.8
9		35.5	35.3	35.9	37.0	37.3	38.6	39.3	39.3	38.7	38.6	37.9	37.3	36.2	35.9	36.6
10		37.2	36.0	36.3	37.4	38.8	40.2	41.4	41.2	40.1	39.3	38.5	37.3	36.7	36.7	37.3
11		37.2	36.6	36.6	37.7	39.4	40.7	40.4	39.7	37.3	35.8	36.5	35.9	36.5	37.3	38.0
12		37.0	36.6	36.6	37.2	39.0	40.1	40.5	41.2	40.5	39.4	38.0	36.9	36.7	36.7	37.4
13		36.9	34.8	34.6	35.3	37.3	39.3	42.8	42.5	41.1	40.1	39.4	38.6	38.1	37.3	37.4
14		37.2	36.0	35.9	36.9	38.8	40.9	41.4	41.5	40.5	39.5	38.6	38.0	37.4	37.2	37.7
15		37.7	37.0	36.5	37.2	38.3	39.7	41.1	41.8	41.5	41.2	40.1	38.7	37.6	37.2	37.6
16		37.4	36.9	35.9	36.3	37.6	39.7	40.7	41.4	40.7	40.1	38.7	38.3	38.3	38.6	39.7
17		37.3	37.0	36.5	37.3	38.3	39.3	40.0	40.4	39.8	39.3	38.3	37.3	37.4	38.3	38.6
18†		37.7	37.2	37.2	37.7	38.7	40.0	40.7	41.1	40.4	39.5	38.8	38.3	38.6	38.4	38.4
19†		38.1	37.3	36.6	37.6	39.5	40.7	40.5	40.9	40.2	39.1	38.0	37.4	37.4	38.1	38.6
20†		38.6	37.4	36.9	37.0	38.3	40.1	41.6	42.8	41.5	39.7	38.4	37.3	37.4	38.0	38.6
21		38.6	37.7	37.3	37.3	38.6	40.0	40.5	40.7	39.8	38.7	37.4	37.0	37.3	37.9	38.4
22†		38.3	37.7	37.4	38.2	38.6	40.0	41.3	41.3	41.2	40.9	40.0	38.8	38.1	37.9	38.4
23		38.2	37.1	37.1	38.3	39.4	40.5	41.3	41.6	41.3	40.8	39.9	38.5	38.5	39.1	39.5
24		37.3	36.3	36.3	36.9	37.9	39.2	39.6	39.6	39.2	38.3	38.3	38.2	37.1	36.9	37.6
25		36.9	36.7	35.5	36.3	38.0	39.8	40.9	40.9	41.3	40.9	39.8	38.4	38.0	37.5	37.4
26		36.1	36.0	35.3	35.2	37.1	39.2	39.9	40.3	39.6	39.3	38.6	37.8	37.3	37.3	37.6
27		35.9	35.0	33.8	34.0	35.6	37.8	39.1	39.5	39.2	38.4	38.1	37.8	37.4	36.8	37.2
28		36.3	35.6	35.3	36.3	37.6	39.0	39.8	40.0	39.3	39.0	37.9	37.5	37.5	37.2	37.5
29††		36.1	35.2	34.8	35.1	36.5	38.5	39.7	40.0	39.7	38.6	37.8	36.8	36.4	37.1	37.6
30		37.1	36.2	36.1	36.0	37.2	38.1	39.1	40.0	39.8	38.6	37.6	36.5	35.2	34.6	35.3
31		37.2	35.9	35.6	36.1	37.0	38.2	38.8	39.8	39.9	39.6	39.6	38.6	37.9	37.8	38.4
Mean		37.2	36.4	36.1	36.7	38.0	39.4	40.4	40.7	40.1	39.3	38.4	37.8	37.4	37.4	37.7
Mean†		38.0	37.4	37.1	37.6	38.8	40.2	41.0	41.2	40.5	39.5	38.5	37.8	37.8	38.0	38.4
Mean††		36.6	35.7	35.6	36.0	37.0	38.4	40.0	40.4	40.4	39.6	37.4	37.5	37.8	37.4	36.9

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 5

## Hourly Values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

May

2° plus tabular quantities

Hours G. M. T.										Maximum		Minimum		Range	Date	
Mean																
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.			
										H. M.		H. M.				
Δ	Δ	Δ	Δ	36.3	36.3	36.7	36.7	36.7	Δ	Δ	Δ	Δ	Δ	Δ	1††	
37.3	37.3	37.2	37.2	37.0	37.2	37.2	37.2	37.2	38.0	07	07	41.8	01	45	35.8	2
37.3	37.6	37.6	37.6	37.4	37.4	37.6	37.3	37.4	37.2	06	52	38.6	03	45	35.8	3
38.1	38.1	38.1	38.1	38.0	37.9	37.7	37.7	37.7	38.1	06	30	40.8	01	10	37.0	4†
38.3	38.4	38.1	38.0	37.9	37.6	37.4	37.4	37.3	38.1	06	25	40.4	01	25	35.9	5
37.6	37.4	37.3	37.3	36.7	36.3	36.6	37.0	36.2	Δ	Δ	Δ	Δ	Δ	Δ	Δ	6††
37.4	37.4	37.2	37.2	37.2	37.3	36.6	36.9	36.9	38.1	07	36	42.6	00	50	35.6	7††
35.5	36.4	36.4	36.4	35.5	35.5	34.9	35.2	35.8	36.8	06	10	40.1	10	02	33.6	8††
37.2	37.3	37.3	37.4	37.3	37.3	37.3	37.3	37.4	37.3	05	07	40.1	01	00	35.3	9
37.3	37.3	37.3	37.6	37.6	37.7	37.4	37.4	37.3	38.0	06	30	41.5	01	25	35.9	10
37.9	37.9	37.7	37.4	37.3	37.2	37.2	37.0	37.3	37.6	05	36	41.5	08	54	35.1	11
37.7	37.7	37.3	37.3	37.3	37.3	37.3	37.3	37.2	37.9	07	25	41.5	01	30	36.2	12
37.7	37.7	37.6	37.7	37.7	37.6	37.7	37.4	37.3	38.1	05	42	43.3	01	45	34.5	13
38.1	38.1	37.9	37.9	38.0	37.9	37.7	38.0	37.7	38.3	06	40	42.1	01	45	35.8	14
38.1	38.0	37.9	38.0	38.0	38.0	37.7	38.1	37.9	38.5	06	50	41.9	02	00	36.5	15
40.0	39.1	39.0	38.3	38.6	38.6	38.3	37.6	37.9	38.7	06	45	41.5	02	00	35.9	16
38.7	38.6	38.1	38.1	38.3	38.3	38.1	38.1	38.3	38.3	06	30	41.5	02	00	36.5	17
38.6	38.6	38.6	38.6	38.7	38.4	38.6	38.6	38.4	38.7	06	40	41.2	01	30	37.0	18†
38.7	38.7	38.7	38.7	38.8	38.8	38.8	39.1	39.0	38.7	04	50	41.1	02	10	36.3	19†
38.7	38.6	38.7	38.7	38.6	38.7	38.7	38.7	38.7	38.8	07	00	42.8	02	20	36.7	20†
38.7	38.7	38.7	38.6	38.7	38.6	38.4	38.4	38.6	38.5	06	15	40.8	02	00	37.3	21
38.9	39.1	38.9	38.5	38.5	38.5	38.4	38.4	38.4	39.0	06	00	41.3	01	45	37.3	22†
38.8	38.7	38.4	38.3	37.4	37.8	37.4	37.8	37.8	38.9	07	15	42.0	01	05	36.3	23
37.9	37.9	38.1	37.9	37.4	37.6	37.6	36.9	37.1	37.8	06	16	40.7	01	00	36.3	24
37.5	37.5	37.1	37.0	37.4	37.0	36.8	36.7	36.6	38.0	08	00	41.3	02	35	35.4	25
37.9	37.8	37.2	37.3	37.3	36.9	36.9	36.5	36.4	37.5	07	15	40.4	02	00	35.0	26
37.4	37.4	37.4	37.0	36.8	36.8	36.7	36.4	36.3	37.0	06	46	39.6	02	46	33.6	27
37.6	37.5	37.5	37.3	37.0	37.2	37.2	36.6	36.6	37.5	06	45	40.1	01	20	35.0	28
37.6	37.6	37.4	37.5	37.2	37.2	37.1	36.7	36.9	37.3	06	30	40.7	02	43	34.7	29††
35.3	35.8	36.2	37.0	37.3	37.3	37.4	37.3	37.3	37.0	06	50	40.1	12	50	34.5	30
38.4	37.9	37.5	37.2	37.1	37.0	36.5	37.0	36.5	37.7	08	00	40.0	01	30	35.5	31
37.9	37.9	37.8	37.7	37.6	37.6	37.5	37.4	37.4	38.0					5.3	Mean	
38.6	38.6	38.6	38.5	38.5	38.5	38.4	38.5	38.4							Mean†	
36.8	37.1	37.0	37.0	36.6	36.7	36.2	36.3	36.5							Mean††	

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 6

## Hourly Values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

2° plus tabular quantities

June

Date	Hours G. M. T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1	35.8	35.3	34.9	35.0	35.0	35.0	37.1	38.5	38.8	39.6	38.4	36.5	35.6	35.6	36.1
2†	36.4	35.4	34.4	34.4	35.3	36.3	37.4	38.5	38.5	38.6	38.6	38.5	37.7	37.1	37.1
3	37.0	36.4	35.6	35.8	37.1	38.5	39.4	40.4	40.1	38.9	37.6	37.2	37.2	37.3	38.0
4††	36.4	35.7	34.7	34.5	35.5	36.2	37.1	38.0	37.2	37.2	37.2	37.3	37.2	37.3	37.3
5	36.1	35.9	35.4	34.8	34.5	35.8	36.6	37.2	37.2	37.2	36.5	35.4	34.7	35.0	35.9
6	35.9	35.4	34.8	34.5	35.7	37.1	38.2	38.5	39.3	38.7	38.0	37.3	37.1	36.8	37.1
7	36.9	36.2	35.4	35.1	36.2	37.3	38.6	39.7	38.9	38.6	38.3	37.6	37.5	37.3	37.1
8	37.1	35.9	35.5	36.3	37.3	37.4	38.6	38.7	38.0	37.3	37.6	37.3	37.7	38.3	38.0
9	37.3	35.8	34.5	35.2	36.0	36.7	37.4	38.6	38.8	38.7	38.3	37.2	36.9	36.3	36.3
10†	36.7	36.0	36.0	37.7	38.8	40.2	41.4	41.8	40.8	40.0	39.8	37.3	36.6	36.3	36.9
11†	36.3	35.8	35.5	35.9	37.4	39.5	41.5	42.6	42.1	40.8	39.7	38.3	37.4	37.3	37.4
12†	37.2	35.6	34.5	35.1	37.3	40.2	41.9	42.5	42.5	41.6	40.2	39.1	38.6	38.0	38.3
13	37.2	36.3	35.8	36.0	37.1	38.8	40.2	40.6	40.5	39.8	39.1	38.2	38.0	37.8	38.1
14	37.4	36.4	36.1	37.0	37.5	38.8	39.9	39.9	39.2	38.7	38.1	37.4	36.7	36.0	36.1
15	37.4	36.4	35.6	34.9	35.9	37.3	38.7	39.6	39.5	38.5	37.5	37.1	36.8	36.3	37.1
16†	37.0	35.9	35.6	36.4	37.8	39.3	40.2	40.2	39.7	39.3	38.9	38.9	38.5	37.8	37.8
17	37.5	37.4	37.1	37.6	38.4	40.0	40.4	41.2	40.7	40.1	38.7	37.6	37.3	37.3	37.7
18	37.8	36.9	36.2	37.1	37.9	39.1	40.0	40.6	39.3	38.8	37.8	37.8	37.8	37.5	37.8
19	37.7	36.4	35.4	35.8	36.9	38.0	39.0	39.2	39.0	38.2	37.8	37.1	37.3	37.9	37.9
20	37.3	36.5	36.2	36.5	37.3	38.1	39.4	40.0	40.4	39.5	39.1	38.0	37.6	37.6	38.0
21	37.9	36.9	36.2	36.0	36.7	38.0	39.3	41.4	40.8	39.5	38.6	37.9	37.4	38.0	39.0
22	36.6	35.8	34.5	34.2	35.3	36.9	38.1	39.4	40.1	39.5	39.0	38.3	38.1	38.3	38.7
23	36.9	36.3	35.9	36.7	36.6	39.3	39.5	40.7	40.7	39.7	38.8	38.4	38.4	38.4	38.8
24	36.7	36.2	35.9	36.5	37.9	39.4	40.8	41.2	41.4	40.9	39.5	38.1	37.3	37.9	39.3
25	37.3	36.3	35.5	35.8	37.9	39.7	40.9	41.4	41.4	41.3	39.8	39.4	38.8	38.1	38.4
26	37.0	35.5	34.8	35.2	37.3	38.8	39.4	39.5	39.5	38.8	38.0	37.7	37.4	38.0	38.4
27††	37.4	36.2	35.3	35.8	36.5	37.2	38.0	39.4	39.5	39.8	39.4	39.1	38.6	38.3	38.3
28††	37.0	36.3	35.5	35.3	36.5	38.0	40.7	41.8	42.1	42.2	40.9	40.4	39.4	39.3	39.0
29††	36.7	36.5	36.3	36.7	38.7	40.7	40.4	41.5	40.9	40.9	40.8	40.0	39.4	39.1	39.3
30††	36.7	36.3	35.1	34.2	34.4	36.6	39.0	40.8	41.5	41.3	40.8	39.4	38.7	38.3	38.3
Mean	36.9	36.1	35.5	35.7	36.8	38.1	39.3	40.1	39.9	39.5	38.8	38.0	37.6	37.5	37.8
Mean†	36.7	35.7	35.2	35.9	37.3	39.1	40.5	41.1	40.7	40.1	39.8	38.4	37.8	37.3	37.5
Mean††	36.8	36.2	35.4	35.3	36.3	37.7	39.0	40.3	40.2	40.4	39.8	39.2	38.7	38.5	38.4

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 6

## Hourly Values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time

June

2° plus tabular quantities

Hours G. M. T.										Maximum		Minimum		Range		Date	
Mean																	
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.				
										H. M.		H. M.					
37.2	37.7	37.5	37.5	37.2	37.1	37.0	37.0	36.8	36.7	09	02	40.0	02	25	34.6	5.4	
37.1	37.4	37.4	37.4	37.1	37.1	37.1	37.1	37.1	37.0	09	00	38.6	02	00	34.4	4.2	
38.0	37.9	37.8	37.2	36.9	36.8	36.8	36.8	36.9	37.6	07	30	40.6	02	25	35.1	5.5	
37.5	37.3	37.1	37.1	37.1	36.8	36.9	36.5	36.2	36.7	09	10	38.6	02	50	34.3	4.3	
36.5	36.5	36.4	36.5	36.6	36.9	36.8	36.6	36.5	36.1	07	10	37.5	03	15	34.4	3.1	
37.2	37.1	37.1	37.1	37.1	37.2	37.2	37.2	37.2	37.0	07	45	39.6	02	45	34.4	5.2	
37.2	37.6	39.2	37.6	37.5	37.2	37.6	37.2	37.2	37.5	07	00	39.7	02	36	35.0	4.7	
38.1	38.0	37.7	37.7	37.6	37.4	37.3	37.7	37.4	37.5	06	22	38.8	01	30	35.4	3.4	
36.9	36.9	37.2	37.0	37.0	37.2	37.0	37.2	37.0	37.0	08	03	39.4	01	54	34.4	5.0	
37.0	37.2	37.3	37.2	37.3	37.2	37.0	37.0	36.9	37.9	06	36	41.9	01	35	35.9	6.0	
37.9	37.6	37.6	37.4	37.6	37.4	37.4	37.6	37.4	38.1	07	00	42.8	01	30	35.3	7.5	
38.4	38.4	38.3	37.7	37.4	37.3	37.3	37.4	37.6	38.4	07	30	42.8	02	00	34.5	8.3	
38.2	38.1	38.1	38.0	38.0	37.8	37.8	37.7	37.8	38.1	07	00	40.6	02	35	35.6	5.0	
37.4	37.5	37.5	37.4	37.4	37.4	37.4	37.4	37.4	37.6	05	55	40.1	13	25	35.7	4.4	
37.5	37.7	37.7	37.7	37.5	37.3	37.3	37.4	37.4	37.3	06	50	39.8	02	55	34.7	5.1	
37.9	37.9	37.9	37.8	37.8	37.8	37.6	37.8	37.8	38.1	06	00	40.2	02	00	35.6	4.6	
38.0	37.9	37.7	37.7	37.6	37.6	37.6	37.7	37.6	38.3	07	20	41.5	01	30	36.8	4.7	
37.9	38.2	38.4	38.4	37.9	37.7	37.8	37.8	37.8	38.1	07	00	40.7	02	00	36.2	4.5	
37.9	37.9	37.9	37.8	37.9	37.6	37.8	37.8	37.6	37.7	06	27	39.3	02	00	35.4	3.9	
38.3	38.1	38.1	38.1	38.3	38.1	38.3	38.0	38.1	38.1	08	00	40.4	02	25	36.1	4.3	
38.8	38.1	38.0	37.7	37.7	37.6	37.3	36.6	36.6	38.0	07	00	41.4	02	20	35.9	5.5	
39.0	38.7	38.4	38.4	38.1	37.9	37.7	37.9	37.3	37.8	07	50	40.4	02	55	33.9	6.5	
39.1	38.8	38.1	38.0	37.9	37.7	37.6	37.4	37.0	38.2	07	25	40.8	01	36	35.6	5.2	
39.4	39.0	38.8	38.4	38.1	38.4	38.0	37.9	37.7	38.5	07	35	41.5	01	25	35.6	5.9	
38.7	38.6	39.0	38.8	38.0	38.0	38.0	37.6	37.6	38.6	07	10	41.9	02	03	35.2	6.7	
38.8	38.7	38.4	38.3	38.0	37.9	37.7	37.7	37.7	37.9	06	05	39.7	02	25	34.2	5.5	
38.4	38.3	38.3	38.0	37.6	37.6	37.0	36.9	37.3	37.8	08	25	40.1	01	48	35.2	4.9	
38.8	39.1	38.3	38.0	38.4	38.1	37.9	37.9	37.7	38.7	08	23	43.3	03	00	35.2	8.1	
39.3	39.1	39.1	39.3	39.3	39.3	39.3	39.3	37.7	39.2	07	00	42.2	01	55	36.0	6.2	
38.7	39.8	38.0	38.1	38.1	38.1	37.6	37.9	38.0	38.2	07	39	42.1	02	42	33.8	8.3	
38.0	38.0	37.9	37.8	37.7	37.6	37.5	37.5	37.3	37.8							5.4	Mean
37.7	37.7	37.7	37.5	37.4	37.4	37.3	37.4	37.4									Mean†
38.5	38.7	38.2	38.1	38.1	38.0	37.7	37.7	37.4									Mean††

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 7

## Hourly Values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

39,000γ plus tabular quantities

January

Date	Hours G. M. T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1†	527	537	551	582	624	636	634	617	587	570	555	547	546	539	532
2†	524	531	552	576	611	639	626	634	600	567	560	557	547	537	533
3	515	513	516	551	602	636	652	637	619	593	571	572	563	544	528
4	523	540	547	562	602	604	619	629	613	601	573	563	560	551	540
5	544	542	556	583	574	586	615	619	620	582	549	525	485	447	453
6	509	507	506	521	536	566	585	580	574	561	548	542	534	527	521
7	521	518	522	537	566	602	638	608	571	566	570	558	547	542	536
8	522	518	515	517	525	559	590	616	618	606	596	585	565	547	543
9†	537	532	529	533	545	595	624	632	624	606	591	578	569	557	551
10††	539	548	556	562	573	616	629	662	566	551	495	477	469	460	442
11††	483	498	524	547	551	544	538	533	535	508	491	503	508	482	474
12	502	509	531	552	575	580	586	575	542	529	529	530	526	510	503
13	510	513	535	563	586	595	576	557	539	530	529	529	529	520	512
14††	535	528	545	567	583	584	563	552	576	556	515	507	498	508	524
15††	444	449	476	499	512	512	541	549	543	553	513	502	490	490	487
16	496	505	533	557	587	615	620	599	555	515	504	512	519	516	508
17	515	517	527	568	634	655	637	619	578	551	540	548	544	566	547
18	547	546	562	609	649	681	666	686	669	555	483	458	468	501	523
19	506	511	519	541	573	607	614	611	590	565	541	541	541	528	520
20	534	539	553	590	646	673	646	634	630	611	573	545	536	536	542
21††	540	523	493	504	518	579	645	653	598	574	553	519	492	494	484
22	486	483	485	505	523	547	586	578	569	534	527	510	522	506	503
23	Δ	Δ	Δ	Δ	549	576	593	581	582	573	558	546	526	509	501
24	515	509	509	518	536	545	567	589	601	596	572	548	538	521	520
25	522	518	526	550	571	610	624	627	619	605	582	563	549	538	529
26	526	535	547	574	595	610	621	601	605	578	561	560	556	540	534
27	523	525	545	564	607	620	628	618	605	590	574	565	556	546	539
28	526	537	567	600	627	636	627	607	549	548	543	549	556	551	539
29	542	546	582	630	664	678	670	648	610	565	558	551	548	552	544
30†	535	545	576	630	676	680	678	667	633	581	555	552	559	557	549
31†	535	537	568	619	658	676	669	637	609	590	575	578	579	571	562
Mean	520	523	537	562	590	611	618	614	592	569	548	540	534	527	521
Mean†	532	536	555	588	624	645	646	637	611	583	567	562	560	552	545
Mean††	508	509	519	536	547	567	583	590	564	548	513	502	491	487	482

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 7

## Hourly Values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

January

39,000γ plus tabular quantities

Hours G. M. T.									Maximum		Minimum		Range		Date		
Mean																	
15	16	17	18	19	20	21	22	23	Time	Mag.	Time	Mag.					
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H.	M.	γ	H.	M.	γ	γ	
530	529	529	530	529	526	525	525	524	555	06	00	646	23	56	522	124	1†
535	530	528	526	526	526	527	525	519	556	05	58	655	23	56	514	141	2†
516	513	517	521	526	528	531	529	525	555	06	15	657	01	14	510	147	3
537	534	537	540	538	540	540	539	543	561	07	06	633	00	02	522	111	4
455	474	489	490	505	505	510	508	510	530	07	44	632	13	05	440	192	5
513	514	518	513	518	517	518	518	521	532	06	02	592	01	19	492	100	6
535	535	534	520	520	544	546	546	546	551	06	06	650	01	22	514	136	7
540	542	538	536	532	528	536	537	539	552	07	30	627	02	30	511	116	8
547	544	540	539	539	539	542	537	535	561	06	40	635	02	32	525	110	9†
428	436	442	460	462	481	494	479	479	513	07	41	696	14	45	416	280	10††
487	473	483	484	487	495	494	498	500	505	03	28	572	13	40	460	112	11††
521	508	501	506	510	504	521	520	512	528	06	45	596	17	30	499	97	12†
508	501	503	510	541	534	526	520	535	533	05	10	600	16	12	500	100	13†
512	511	518	520	502	465	451	455	434	521	08	23	646	23	08	429	217	14††
477	476	475	472	479	487	483	487	491	495	07	06	566	00	36	441	125	15††
509	508	506	512	510	511	510	516	513	531	04	45	628	00	01	495	133	16
531	522	521	530	531	533	536	541	544	556	04	54	657	00	25	514	143	17
514	502	502	506	501	501	506	512	507	548	07	35	730	11	00	450	280	18
521	515	521	530	524	527	527	533	536	543	05	32	620	00	26	504	116	19
528	500	495	502	514	521	518	518	531	559	05	15	694	16	59	483	211	20
479	475	488	466	468	492	487	486	489	521	06	59	666	19	14	455	211	21††
501	492	499	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ		Δ	Δ		Δ	Δ	22†
499	500	511	514	505	511	515	516	518	Δ	Δ		Δ	Δ		Δ	Δ	23†
514	511	514	521	516	517	522	524	522	535	07	38	607	02	22	497	110	24†
529	525	523	533	528	525	525	525	525	553	06	48	636	01	18	514	122	25†
534	532	525	524	529	529	527	524	525	554	06	10	630	17	30	520	110	26
537	538	535	534	533	531	530	529	525	558	05	36	633	01	30	520	113	27
537	534	534	535	536	549	545	543	541	559	05	15	642	00	02	526	116	28
535	531	531	531	532	536	535	530	532	570	07	02	693	17	30	528	165	29
546	545	543	542	542	541	539	537	536	577	05	26	690	00	10	534	156	30†
554	547	545	542	543	543	542	546	548	578	05	22	692	00	10	534	158	31†
518	514	515	516	518	520	521	520	520	545							147	Mean
542	539	537	536	536	535	535	534	532								Mean†	
477	474	481	480	480	484	482	481	479								Mean††	

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).



TABLE 8

## Hourly Values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

39,000γ plus tabular quantities

February

Date	Hours G. M. T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	549	552	579	625	672	698	704	686	654	605	570	532	515	510	509
2	536	532	534	573	608	636	666	656	628	605	586	571	565	559	547
3	504	505	520	555	589	611	620	616	607	575	549	528	515	502	508
4	504	500	498	531	580	624	618	645	617	575	548	532	529	522	519
5	520	517	523	542	569	593	619	637	617	588	601	562	508	500	493
6	498	504	511	531	557	575	583	589	584	561	555	546	536	523	514
7†	535	538	551	577	602	607	633	650	647	630	607	587	562	547	540
8	540	539	548	563	583	616	636	641	630	607	574	563	542	544	539
9†	534	537	549	567	587	613	632	642	639	627	612	596	585	574	564
10†	564	572	590	613	636	651	624	630	579	570	565	562	555	544	538
11	536	542	560	583	605	623	635	637	625	606	593	578	564	550	540
12	509	509	527	548	575	594	610	617	588	557	539	536	533	529	526
13	533	541	554	585	620	642	671	664	638	611	586	569	572	566	555
14††	471	481	496	518	549	571	570	569	563	556	547	545	493	477	471
15	499	497	500	503	542	577	593	595	578	563	556	550	540	525	495
16††	514	518	534	560	573	597	601	585	565	562	585	570	548	537	516
17††	520	522	546	616	599	637	658	630	591	573	575	550	536	541	521
18††	514	502	492	495	535	550	570	556	537	544	530	525	509	502	502
19	510	515	530	553	583	623	632	628	618	595	572	554	534	527	522
20	497	492	488	484	518	528	553	570	570	558	543	535	527	516	509
21††	518	520	531	546	568	576	618	595	569	573	560	532	521	511	503
22	521	520	527	541	569	600	622	623	609	597	580	565	550	536	528
23	524	522	537	565	597	626	632	622	602	586	568	564	555	537	526
24†	526	528	515	570	600	634	649	637	622	608	591	571	554	543	533
25†	522	519	528	565	612	656	683	679	654	627	600	581	566	554	544
26	535	535	558	577	615	648	656	649	615	584	571	579	578	577	557
27	530	529	545	571	596	630	637	654	635	609	551	550	542	539	527
28	539	528	533	560	621	644	675	681	650	611	583	558	550	545	539
29	524	514	513	543	598	674	696	680	642	609	568	542	545	542	534
Mean	522	522	532	557	588	616	631	630	609	589	571	556	542	534	525
Mean†	536	539	547	578	607	632	644	648	628	612	595	579	564	552	544
Mean††	507	509	520	547	565	586	603	587	565	562	559	544	521	514	503

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record, (day omitted for means).

TABLE 8

## Hourly Values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

February

39,000-y plus tabular quantities

Hours G. M. T.									Maximum		Minimum		Range		Date
Mean															
15	16	17	18	19	20	21	22	23	Time	Mag.	Time	Mag.			
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	H. M.	Y	H. M.	Y	Y	
514	516	517	521	527	533	540	540	537	571	06 03	710	13 30	505	205	1
520	513	486	475	439	471	492	492	500	550	06 00	670	19 10	431	239	2
497	491	480	474	489	502	501	501	497	531	05 50	627	17 58	471	156	3
517	512	511	503	497	513	511	518	517	539	06 50	664	18 52	487	177	4
491	471	468	480	488	487	491	499	502	532	07 18	656	16 23	438	198	5
509	500	485	491	503	508	514	519	532	530	07 40	604	16 36	475	129	6
539	537	536	535	535	537	536	541	543	569	07 02	662	18 52	532	130	7†
535	532	532	519	525	529	532	533	535	560	06 28	656	17 58	515	141	8
538	559	557	551	546	543	549	555	557	576	07 00	645	00 20	531	114	9†
534	530	527	526	525	528	533	535	537	565	05 20	661	18 45	524	137	10†
536	526	512	498	497	503	498	500	511	557	06 56	644	18 38	489	155	11
527	527	526	527	527	527	527	529	529	543	07 00	626	00 30	504	122	12
550	542	537	535	533	515	488	484	467	565	06 22	678	23 38	461	217	13
462	471	482	474	473	507	510	504	501	511	05 15	576	14 58	458	118	14††
477	480	500	495	487	499	509	515	518	525	07 02	603	15 28	474	129	15
467	484	492	500	508	519	513	513	519	537	05 43	606	14 56	463	143	16††
502	512	499	480	481	486	494	514	516	546	06 18	689	18 00	474	215	17††
503	489	490	499	503	504	508	508	507	516	06 06	616	02 25	481	135	18††
513	504	505	530	502	488	517	511	499	544	06 25	659	20 08	479	180	19
504	501	508	504	510	513	513	512	516	520	06 45	583	03 10	473	110	20
502	499	521	513	512	519	526	523	522	537	05 59	632	15 45	497	135	21††
526	522	522	521	521	524	526	529	526	550	06 30	632	19 48	516	116	22
518	516	524	515	514	519	520	523	525	532	06 23	646	18 20	511	135	23
532	531	528	526	526	526	524	524	525	559	05 12	653	21 10	522	131	24†
542	538	537	537	534	527	518	528	536	570	06 22	693	00 58	518	175	25†
548	541	533	536	534	533	535	537	533	569	05 26	658	17 15	526	132	26
537	522	510	521	527	523	527	532	541	558	06 53	686	17 20	507	179	27
538	559	559	557	558	559	562	562	562	576	06 58	687	01 24	526	161	28
517	511	518	514	520	516	507	502	513	556	06 20	702	21 32	499	203	29
518	515	514	513	512	516	518	520	521	549					156	Mean
541	539	537	535	533	532	532	537	540							Mean†
487	491	497	493	495	507	510	512	513							Mean††

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 9

## Hourly Values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

March

39,000γ plus tabular quantities

		Hours G. M. T.														
Date		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1		515	516	523	549	587	634	641	650	638	582	554	541	532	520	518
2††		495	493	501	518	567	594	596	599	598	552	543	538	517	499	495
3††		511	502	513	532	547	563	585	570	556	544	516	526	517	512	484
4		513	514	525	547	580	596	616	615	601	580	566	548	528	501	491
5		513	511	522	549	579	600	621	608	571	552	551	550	549	531	517
6		518	532	548	594	539	664	694	689	668	625	583	567	555	543	531
7†		521	520	533	540	592	629	647	655	647	628	604	580	566	555	544
8		545	547	561	591	518	673	695	685	665	644	601	555	523	507	501
9		542	546	533	570	583	608	624	614	627	616	603	576	563	548	543
10		540	543	555	581	614	636	662	660	638	589	517	528	534	527	523
11††		527	528	550	587	619	653	632	623	595	557	555	520	507	506	496
12		500	505	531	569	607	637	650	625	596	564	550	544	540	531	526
13†		518	517	532	573	624	667	685	677	655	619	582	558	547	538	532
14		530	532	549	583	622	660	680	678	651	619	575	555	557	552	544
15		559	553	552	573	614	651	678	675	661	624	590	570	560	555	543
16††		472	451	436	466	465	497	491	472	508	508	508	498	480	463	472
17		488	486	491	529	546	587	604	587	569	544	537	522	509	506	496
18		505	506	520	563	602	624	629	623	600	572	558	551	537	524	519
19		523	522	520	544	552	631	668	679	656	628	579	550	529	513	507
20†		525	524	534	565	595	625	635	631	613	592	573	565	560	549	539
21		533	532	536	556	589	618	628	610	590	572	570	570	558	536	520
22†		532	527	534	561	601	627	637	628	615	598	587	579	567	551	540
23†		533	536	545	574	615	658	671	651	618	592	577	571	564	553	544
24		545	540	558	599	635	667	685	670	627	595	573	567	562	553	546
25		521	524	553	596	644	673	685	650	617	573	554	546	544	539	533
26		526	533	554	596	637	663	661	627	582	543	528	552	563	559	541
27		540	540	558	510	673	705	705	677	633	586	563	545	549	553	545
28		530	527	540	578	625	677	704	681	646	605	564	525	525	539	536
29		521	499	510	545	591	635	658	694	632	547	539	538	539	535	526
30		515	510	501	531	605	689	698	698	665	611	548	536	545	539	532
31††		482	492	512	545	587	646	635	605	551	497	489	530	471	440	443
Mean		521	520	530	559	592	635	648	639	616	583	559	548	539	528	520
Mean†		526	525	536	558	605	641	655	648	630	606	585	571	561	549	540
Mean††		497	493	502	530	557	591	588	574	562	532	522	522	498	484	474

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 9

## Hourly Values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

March

39,000γ plus tabular quantities

Hours G. M. T.									Maximum		Minimum		Range		Date
Mean															
15	16	17	18	19	20	21	22	23	Time	Mag.	Time	Mag.			
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	H. M.	Y	H. M.	Y	Y	
516	509	498	493	489	502	494	499	501	542	07 28	658	18 52	476	182	1
502	497	494	497	489	488	495	510	517	525	07 36	621	19 10	485	136	2††
459	473	488	492	497	497	503	505	509	517	06 27	592	15 22	455	137	3††
493	484	471	464	479	492	496	505	516	530	06 34	623	18 02	462	161	4
521	520	520	520	514	504	505	516	525	540	05 34	629	19 42	501	128	5
526	520	511	516	516	527	524	524	523	564	06 02	705	16 32	509	196	6
540	537	537	536	534	533	539	543	545	567	05 43	665	00 55	517	148	7†
491	482	488	502	508	517	523	529	530	558	05 54	702	15 28	476	226	8
529	530	531	527	529	541	541	547	547	563	05 30	639	15 08	522	117	9
513	504	501	492	499	517	517	518	525	551	06 08	679	18 13	487	192	10
505	505	484	486	484	493	496	499	496	538	05 14	665	17 20	479	186	11††
521	515	510	510	514	518	520	521	521	547	06 02	655	00 06	499	156	12
528	527	527	531	531	522	523	528	531	565	06 08	695	00 47	512	183	13†
550	549	529	530	525	530	532	530	537	571	06 04	689	00 40	528	161	14
523	505	479	463	464	479	474	477	468	554	06 30	688	18 50	462	226	15
487	471	470	474	439	480	479	472	488	477	05 15	606	06 18	393	213	16††
495	493	496	493	499	508	509	505	505	521	05 57	609	01 36	483	126	17
522	519	523	521	522	522	523	522	524	547	05 34	673	00 25	502	171	18
498	492	504	513	519	521	523	525	526	551	07 02	687	15 54	488	199	19
535	532	531	530	532	533	536	535	533	559	06 07	643	00 46	521	122	20†
520	525	525	525	527	528	531	532	532	553	05 45	642	14 15	516	126	21
538	537	535	534	533	535	535	535	534	563	06 22	651	00 48	525	126	22†
540	539	535	532	534	533	534	542	545	568	05 58	676	00 10	532	144	23†
546	528	522	519	534	530	528	537	534	571	05 55	702	20 34	514	188	24
532	530	530	529	524	526	529	530	527	563	06 04	696	01 30	518	178	25
540	539	534	537	540	540	540	539	540	563	05 40	691	09 45	519	172	26
540	537	534	533	534	535	534	534	533	571	05 26	720	23 59	529	191	27
528	506	484	498	501	514	526	527	516	558	05 40	710	16 52	478	232	28
518	518	516	519	518	519	518	518	519	549	07 22	733	00 40	495	238	29
521	509	481	476	466	464	459	467	578	548	06 31	709	21 18	452	257	30
448	412	290	334	361	411	403	371	337	471	05 03	663	17 18	248	415	31††
517	511	503	504	505	513	513	514	518	547				182		Mean
536	534	533	533	533	531	533	537	538							Mean†
480	472	445	457	454	474	475	471	469							Mean††

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; day omitted for means).

TABLE 10  
Hourly Values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

April

39,000γ plus tabular quantities

		Hours G. M. T.														
Date		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1††		328	330	352	458	446	460	437	462	516	501	403	388	321	226	195
2		266	278	321	354	381	396	388	372	333	364	359	368	389	411	409
3††		471	462	426	488	502	534	470	381	375	439	462	458	454	433	430
4		434	435	456	506	544	576	595	593	563	515	489	482	475	470	466
5		468	475	503	591	665	626	613	614	619	560	514	504	484	483	475
6		468	468	482	518	574	595	602	595	551	516	503	508	510	499	490
7		475	476	501	525	580	588	603	594	561	534	521	519	516	507	494
8		462	467	487	521	540	575	594	542	514	487	470	465	471	482	476
9†		480	487	501	544	585	605	608	566	538	506	503	506	506	503	494
10		496	506	531	596	656	691	665	659	596	555	531	517	503	477	470
11		488	472	477	517	578	607	600	583	552	518	499	505	504	498	502
12		479	483	505	552	573	597	602	612	542	499	493	496	493	477	463
13		492	499	532	584	641	707	624	588	518	494	508	518	519	509	497
14		493	483	490	533	584	617	649	624	603	573	546	516	510	508	504
15		502	506	509	567	616	660	598	609	587	553	529	520	525	523	514
16		497	490	497	546	594	642	677	664	645	608	573	545	512	477	476
17		474	484	495	519	568	607	615	599	579	547	515	510	515	512	507
18		490	478	495	539	578	605	635	593	575	536	535	522	509	500	495
19†		501	502	518	547	587	619	630	620	598	580	561	547	537	527	518
20†		507	507	522	558	598	636	647	643	626	596	573	554	543	535	526
21†		514	514	534	572	610	642	651	645	619	589	572	565	562	552	541
22†		532	534	552	583	620	639	642	629	592	558	547	549	557	549	538
23		529	527	543	590	631	652	687	650	623	582	561	571	576	570	558
24††		460	430	396	360	481	502	559	570	539	497	478	466	456	441	437
25		449	434	452	471	532	581	581	529	538	474	461	442	430	420	416
26		469	469	492	520	559	583	606	584	558	506	481	515	487	489	477
27		475	487	504	544	587	619	618	595	566	533	505	498	499	499	486
28††		467	404	366	412	466	517	566	545	462	423	354	349	352	366	363
29		440	434	455	499	564	577	551	551	505	486	461	470	441	444	442
30††		463	467	477	487	499	559	544	546	508	496	516	523	522	459	308
Mean		469	466	479	520	565	594	595	579	550	521	501	497	489	478	466
Mean†		507	509	525	561	600	628	636	621	595	566	551	544	541	533	523
Mean††		438	419	403	441	479	514	515	501	480	471	458	436	421	385	347

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 10

## Hourly Values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

April

39,000γ plus tabular quantities

Hours G. M. T.										Maximum		Minimum		Range		Date
Mean																
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.			
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ		
115	—6	86	75	89	166	150	234	252	291	08 23	655	16 18	—73	728	1††	
408	406	409	419	421	422	423	425	443	382	23 33	471	00 31	255	216	2	
423	423	430	430	427	433	435	430	433	444	05 32	596	07 26	332	264	3††	
461	454	461	443	462	460	456	477	473	489	05 54	611	00 46	433	178	4	
468	466	450	448	451	461	466	464	453	513	04 15	733	17 03	442	291	5	
480	482	499	493	493	482	477	476	473	510	05 47	638	00 47	464	174	6	
491	470	465	429	420	438	447	461	470	504	06 10	624	18 42	395	229	7	
474	473	480	481	484	481	482	482	479	495	06 12	621	09 30	457	164	8	
492	490	491	492	492	495	497	502	500	516	05 44	632	00 01	479	153	9†	
480	474	470	492	521	488	464	451	459	531	05 05	740	22 35	432	308	10	
497	481	483	484	489	489	484	491	489	512	05 12	628	01 23	465	163	11	
469	471	472	473	476	476	476	482	492	506	05 23	637	14 00	461	176	12	
493	491	495	489	486	499	498	495	493	528	05 05	728	18 38	484	244	13	
502	499	502	508	502	499	502	507	505	532	06 02	670	01 17	480	190	14	
512	509	511	509	509	506	503	503	502	537	04 36	703	23 59	497	206	15	
433	401	426	446	454	457	480	479	477	521	06 22	703	16 12	391	312	16	
504	505	497	487	473	474	490	492	489	519	05 37	637	19 15	465	172	17	
490	488	495	496	495	498	500	501	500	523	05 58	654	01 24	468	186	18	
514	511	511	509	509	509	510	510	509	541	06 15	636	00 32	497	139	19†	
523	521	518	515	516	516	517	516	516	551	06 04	655	00 34	504	151	20†	
538	537	535	532	531	529	529	532	531	562	06 30	656	00 45	512	144	21†	
532	525	526	527	526	528	530	530	529	557	05 22	651	15 58	523	128	22†	
555	545	538	536	539	533	511	509	475	566	06 13	700	23 46	461	239	23	
443	446	445	440	441	435	443	471	466	463	07 15	576	03 06	324	252	24††	
438	417	443	444	434	443	449	463	468	467	04 34	611	13 55	406	205	25	
474	467	457	458	459	460	465	469	469	499	06 08	612	17 30	455	157	26	
483	478	479	480	476	488	481	437	457	511	04 58	624	22 35	432	192	27	
351	335	339	340	357	412	433	431	432	410	06 35	601	15 42	327	274	28††	
441	450	452	452	447	446	456	462	462	475	04 50	600	01 12	427	173	29	
242	284	163	42	32	89	111	198	226	365	06 04	611	17 40	—86	697	30††	
458	450	451	446	447	454	455	463	464	494					237	Mean	
520	517	516	515	515	515	517	518	517							Mean†	
315	296	293	265	269	307	314	353	362							Mean††	

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 11

## Hourly Values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

May

39,000γ plus tabular quantities

		Hours G. M. T.															
Date		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	
		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
1††		255	288	360	401	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
2		428	427	437	488	514	552	573	568	560	540	500	471	465	460	458	
3		496	486	499	525	535	550	572	578	579	560	540	526	507	494	489	
4†		492	495	515	544	571	593	595	586	569	549	539	529	525	516	512	
5		503	506	524	558	595	622	627	629	582	556	541	534	528	518	515	
6††		506	526	540	566	622	632	666	646	611	582	559	517	487	455	447	
7††		460	471	512	509	545	594	548	549	554	561	531	531	542	506	493	
8††		472	485	504	505	582	639	647	634	596	576	406	469	467	397	330	
9		467	480	489	530	542	556	568	532	519	498	512	502	485	471	460	
10		479	493	510	539	574	599	508	598	573	538	525	513	503	495	490	
11		500	500	524	571	609	671	607	575	516	448	472	506	508	493	481	
12		488	493	515	555	595	609	593	589	572	546	516	486	486	484	488	
13		495	505	526	567	609	658	765	697	642	597	546	526	523	520	511	
14		494	491	514	562	615	652	649	650	622	575	527	514	507	503	501	
15		507	509	515	542	583	615	641	649	630	600	566	531	498	491	494	
16		501	506	519	548	592	629	638	640	631	601	557	532	533	542	567	
17		531	529	546	563	594	609	617	636	575	554	517	512	525	526	505	
18†		517	514	534	547	576	608	604	589	585	570	556	541	538	533	527	
19†		518	524	537	566	598	612	591	577	562	532	515	527	532	535	531	
20†		527	526	533	568	615	639	646	640	613	579	550	538	537	542	541	
21		532	533	547	579	615	644	664	648	625	588	561	536	530	539	532	
22†		539	542	554	582	609	625	635	636	626	609	594	575	557	548	545	
23		561	569	583	610	638	661	667	659	645	618	598	580	572	571	570	
24		536	549	536	555	558	590	589	537	503	518	498	498	482	480	477	
25		507	495	503	524	552	584	580	561	573	565	553	544	531	520	489	
26		492	508	518	535	554	583	601	600	579	573	552	523	509	511	508	
27		509	502	506	511	518	569	568	610	613	589	522	522	505	505	508	
28		516	523	537	562	592	620	620	620	591	571	551	534	528	525	524	
29††		525	518	519	481	522	581	622	623	616	585	556	527	526	548	537	
30		534	549	548	562	574	586	605	611	606	570	550	523	491	484	479	
31		517	511	511	528	558	589	608	628	637	613	599	570	560	561	562	
Mean		505	509	522	546	579	609	614	610	590	565	538	525	516	509	502	
Mean†		519	514	535	561	594	615	614	606	591	568	551	542	538	535	531	
Mean††		491	500	519	515	568	612	621	613	594	576	513	511	506	477	452	

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 11  
Hourly values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

May

39,000γ plus tabular quantities

Hours G. M. T.										Maximum			Minimum		Range		Date
Mean																	
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.				
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ			
Δ	Δ	Δ	Δ	413	417	421	429	428	Δ	Δ	Δ	Δ	Δ	Δ	1††		
457	460	460	465	466	475	499	496	496	488	05 45	584	00 30	419	165	2		
488	486	487	491	491	494	495	493	492	515	07 55	587	15 30	483	104	3		
508	509	509	511	508	503	499	499	501	528	05 15	602	00 27	489	113	4†		
514	514	513	513	509	505	513	512	506	539	06 42	644	23 33	497	147	5		
460	464	454	470	432	436	436	455	451	518	05 45	674	18 45	407	267	6††		
487	488	478	478	479	473	468	469	465	508	04 33	613	16 59	444	169	7††		
293	328	342	377	407	412	406	420	432	464	06 48	680	15 22	275	405	8††		
458	463	468	466	467	470	475	478	480	493	05 08	652	14 40	452	200	9		
483	485	484	489	493	494	493	483	489	514	05 36	618	00 04	476	142	10		
480	480	480	484	483	477	474	478	487	513	04 42	713	09 00	435	278	11		
484	483	482	491	495	497	499	495	491	518	05 28	630	12 27	473	157	12		
504	505	502	501	499	506	505	499	495	550	05 41	827	23 00	492	335	13		
497	486	498	504	507	507	507	510	508	538	06 40	668	00 50	485	183	14		
497	499	499	502	506	505	504	504	502	537	06 47	656	12 50	486	170	15		
549	498	510	505	510	520	567	554	565	555	06 54	647	17 12	482	165	16		
511	504	505	514	516	515	515	516	516	540	06 32	691	10 35	495	196	17		
523	523	523	525	524	528	527	525	521	544	05 47	624	00 01	516	108	18†		
529	528	528	529	528	525	527	529	529	542	04 50	625	09 50	512	113	19†		
538	537	536	537	538	540	538	538	539	560	06 10	649	01 26	524	125	20†		
530	532	532	534	536	536	539	538	538	562	06 00	675	14 22	527	148	21		
559	563	561	559	564	562	559	555	556	576	06 22	638	01 06	538	100	22†		
560	538	528	521	517	508	537	531	534	578	05 26	672	20 15	502	170	23		
476	472	476	476	480	496	496	491	502	511	06 04	613	07 37	468	145	24		
492	494	490	498	505	501	498	495	495	523	04 58	606	14 15	479	127	25		
507	505	507	516	511	506	509	508	505	530	06 14	619	00 18	489	130	26		
508	505	504	502	508	511	509	509	511	527	07 48	625	02 45	491	134	27		
521	518	516	516	517	528	567	546	541	549	05 22	632	00 10	513	119	28		
518	507	503	513	510	493	493	503	507	535	06 32	672	02 45	445	227	29††		
479	474	475	480	485	492	499	501	502	527	06 52	625	14 22	469	156	30		
554	546	544	540	540	542	543	550	541	560	07 58	649	00 02	506	143	31		
499	496	496	500	501	502	507	506	507	531					171	Mean		
531	532	531	532	532	532	530	529	529							Mean†		
440	447	444	460	457	454	451	462	464							Mean††		

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).



TABLE 12

## Hourly values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

39,000γ plus tabular quantities

June

		Hours G. M. T.														
Date		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1		532	538	534	550	546	581	593	586	563	559	534	492	473	468	487
2†		523	524	512	522	544	580	611	628	637	618	584	553	532	529	530
3		528	528	532	554	577	618	636	631	605	568	536	534	544	547	541
4††		509	506	516	575	631	602	558	544	466	489	495	503	506	494	471
5		480	465	459	433	460	480	510	527	503	496	468	434	436	434	445
6		488	487	509	531	528	537	561	536	553	495	519	493	495	495	493
7		503	515	529	527	559	584	599	607	594	570	521	518	522	520	511
8		519	529	546	574	602	567	555	532	538	515	536	530	530	529	525
9		508	514	520	551	591	598	580	580	585	553	541	517	516	516	507
10†		516	526	538	565	593	611	616	608	589	570	554	536	525	527	523
11†		520	532	547	576	609	642	650	633	592	570	547	532	529	536	537
12†		529	530	542	584	641	678	683	672	643	618	591	561	549	550	553
13		538	539	538	562	592	628	649	654	637	607	583	559	554	550	545
14		545	548	547	568	599	639	666	645	614	584	551	526	514	502	492
15		523	529	534	546	579	610	626	630	606	555	529	524	520	520	523
16†		525	531	552	545	595	589	624	600	586	573	565	560	552	539	535
17		530	535	533	549	587	625	631	625	604	581	558	543	540	545	546
18		540	546	551	572	565	617	626	628	605	579	560	537	536	530	521
19		551	558	561	563	586	590	600	590	562	530	516	510	505	507	500
20		518	527	542	564	590	594	587	574	562	550	538	534	529	523	518
21		522	526	534	547	578	585	614	614	583	547	513	488	482	492	507
22		518	520	523	537	561	590	589	603	609	586	575	553	536	528	526
23		520	526	527	536	566	575	584	584	591	589	572	556	546	538	533
24		522	538	544	569	575	597	619	628	606	584	560	531	515	521	527
25		535	538	541	550	586	614	627	624	613	583	550	541	530	521	522
26		516	513	521	557	584	604	602	567	555	528	501	490	501	522	530
27††		529	529	567	580	529	526	466	504	539	529	514	511	506	500	497
28††		518	522	524	521	548	576	643	644	612	609	575	536	492	492	493
29††		499	507	504	524	559	615	582	612	578	566	566	548	538	531	526
30††		486	468	445	432	387	418	483	537	560	553	536	522	512	498	493
Mean		520	523	529	545	568	589	599	598	583	562	576	526	519	517	515
Mean†		523	529	538	558	596	620	637	628	609	590	568	548	537	536	536
Mean††		508	506	511	526	531	547	546	568	551	549	537	524	511	503	496

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 12

## Hourly values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

June

39,000γ plus tabular quantities

Hours G. M. T.										Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23	Mean	Time	Mag.	Time	Mag.		
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
506	514	517	520	517	513	519	519	519	528	05 36	608	13 15	463	145	1
527	529	531	534	531	529	528	529	529	550	07 54	640	01 32	508	132	2†
540	543	543	534	529	526	523	528	522	553	06 06	641	23 59	512	129	3
463	470	467	473	477	512	491	509	512	510	04 38	663	07 58	435	228	4††
457	460	462	466	474	492	491	494	495	472	07 00	544	03 18	421	123	5
498	490	489	494	501	509	514	512	511	510	06 08	593	11 12	480	113	6
509	510	510	511	527	527	524	521	521	535	07 20	621	00 10	500	121	7
521	517	516	512	512	509	500	511	517	531	04 30	625	20 42	497	128	8
504	502	506	511	515	516	516	514	515	532	04 24	611	14 45	500	111	9
521	521	519	520	520	521	520	519	517	545	05 54	622	00 06	514	108	10†
535	532	531	530	530	531	530	529	529	555	05 32	654	00 01	518	136	11†
550	550	544	539	539	536	538	540	540	575	06 10	695	01 08	527	168	12†
540	538	536	534	540	543	544	543	544	567	06 28	669	17 42	532	137	13
506	509	512	518	519	520	517	516	521	549	05 50	675	13 45	486	189	14
525	526	520	516	517	521	526	526	527	544	06 50	637	18 10	512	125	15
531	531	530	528	531	531	532	532	533	552	06 06	638	00 20	524	114	16†
543	532	520	519	526	532	535	531	535	554	05 19	635	17 20	515	120	17
528	539	543	540	542	548	548	551	551	558	05 38	641	14 06	518	123	18
495	499	499	501	503	505	515	513	514	532	06 26	615	14 54	493	122	19
518	515	524	526	525	526	525	522	523	540	05 15	599	15 42	512	87	20
509	499	498	501	500	506	508	506	509	528	06 15	625	11 06	477	148	21
525	525	526	529	531	528	530	529	521	546	07 46	615	23 50	511	104	22
534	526	520	512	512	513	517	518	522	542	06 06	596	18 15	509	87	23
529	526	524	515	514	531	531	530	532	549	06 49	638	19 15	508	130	24
518	515	531	524	510	502	507	514	517	546	06 15	631	20 23	495	136	25
527	525	526	530	529	526	526	535	530	535	04 34	622	10 52	487	135	26
498	500	507	500	488	492	495	495	503	513	02 28	605	06 00	419	186	27††
492	488	483	483	500	503	509	505	500	532	07 15	698	17 26	479	219	28††
523	532	517	514	520	543	544	543	514	542	07 02	669	23 56	479	190	29††
493	492	493	518	515	513	494	507	504	494	07 41	567	04 06	329	238	30††
516	515	515	515	516	520	520	521	521	537					141	Mean
533	533	531	530	530	530	530	530	530							Mean†
494	496	493	498	500	513	507	512	507							Mean††

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means.)

TABLE 13

## Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

2,000Y plus tabular quantities

January

Date	Hours G. M. T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1†	309	310	313	313	311	305	303	303	305	301	299	297	295	300	302
2†	311	312	308	312	313	312	309	312	314	314	311	302	295	300	302
3	306	307	305	310	306	300	299	294	295	292	294	295	289	292	293
4	306	307	301	303	297	287	288	275	275	285	287	297	298	298	298
5	306	304	310	310	286	272	266	257	248	248	264	273	275	275	293
6	300	300	298	300	304	298	290	292	288	285	287	296	298	299	302
7	305	305	300	295	291	281	265	269	285	290	289	285	292	298	301
8	304	308	308	316	309	302	301	301	296	291	290	290	292	296	299
9†	295	291	298	319	325	309	299	292	289	293	296	295	293	295	297
10††	301	304	305	320	321	313	300	307	289	277	264	264	277	288	286
11††	296	300	295	298	296	296	296	297	297	296	295	290	295	294	295
12	302	302	301	300	296	285	285	296	309	307	297	294	294	295	296
13	296	297	295	295	288	283	283	290	296	296	294	286	286	296	297
14††	298	289	291	298	300	297	302	310	315	295	286	264	273	294	304
15††	284	284	292	303	312	308	309	320	318	301	294	284	283	296	298
16	306	304	298	293	284	272	266	265	271	285	291	289	290	296	297
17	300	296	293	291	275	265	264	270	275	284	287	293	294	305	295
18	303	297	295	299	299	287	287	295	284	263	283	277	282	297	306
19	297	299	296	300	296	288	283	285	283	287	293	297	296	295	295
20	299	297	294	302	297	273	261	260	266	272	278	279	284	292	300
21††	297	301	304	307	304	296	300	295	285	291	295	288	279	288	292
22	298	297	295	304	301	285	284	284	286	285	295	296	303	298	302
23	303	304	303	299	291	279	271	272	267	262	271	279	284	286	291
24	297	297	299	303	315	310	304	299	282	270	279	290	297	296	299
25	302	305	302	300	297	288	286	279	275	273	273	285	292	297	298
26	303	302	297	299	295	282	281	281	283	283	286	287	288	293	299
27	303	306	300	298	294	291	289	289	279	277	277	280	287	297	300
28	303	299	292	294	298	291	288	293	293	298	297	293	287	291	298
29	300	301	301	302	287	269	265	274	284	293	300	289	284	294	300
30†	305	301	295	298	294	280	276	278	288	294	299	296	289	289	296
31†	302	304	300	293	288	278	277	288	299	294	294	299	295	299	300
Mean	301	301	303	302	299	290	286	291	288	287	289	288	289	294	298
Mean†	304	304	303	307	306	297	293	295	299	299	300	298	293	297	299
Mean††	295	296	297	305	307	302	301	306	301	292	287	278	281	292	297

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 13

## Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

January

2,000γ plus tabular quantities

Hours G. M. T.										Maximum		Minimum		Range	Date	
Mean																
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.			
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H.	M.	γ	H.	M.	γ	γ
303	303	307	308	309	308	307	308	309	305	03	00	313	12	00	294	1†
305	303	305	306	307	306	308	307	306	308	08	00	314	12	08	291	2†
293	298	302	307	310	308	308	306	306	301	03	09	312	12	00	289	3
299	299	303	304	303	303	301	303	305	297	01	00	307	07	30	267	4
298	309	312	309	310	308	306	303	305	289	16	50	314	08	38	242	5
299	302	304	304	304	304	304	304	305	299	23	00	305	08	25	284	6
301	301	303	298	301	304	303	303	304	299	00	01	305	06	20	263	7
299	301	299	301	301	301	307	303	302	301	02	50	320	10	00	289	8
298	299	299	301	301	301	301	297	298	299	03	07	326	08	00	289	9†
288	295	296	303	301	307	307	296	297	296	03	10	326	10	32	250	10††
301	297	303	303	302	304	300	301	302	298	16	54	309	11	00	288	11††
304	297	297	301	302	300	307	303	297	299	21	10	312	05	10	284	12
297	296	301	303	310	303	297	296	298	295	19	05	324	05	45	280	13
296	295	297	298	291	282	284	290	283	293	08	27	327	11	10	260	14††
296	298	300	301	304	308	306	307	308	301	07	09	324	11	15	279	15††
299	297	299	303	303	303	305	305	300	293	21	25	308	06	23	263	16
294	293	296	301	301	300	300	301	302	291	12	54	311	05	45	263	17
297	294	295	299	296	297	299	306	299	293	13	20	307	08	50	259	18
296	295	300	305	299	301	301	303	305	296	22	15	307	06	00	283	19
294	284	290	297	302	301	296	297	296	288	03	17	308	07	00	260	20
292	294	298	290	296	307	298	297	300	296	19	45	315	11	44	274	21††
302	298	303	303	303	303	303	302	301	297	02	55	308	08	44	280	22
292	296	299	299	296	297	299	298	299	289	17	25	305	08	50	261	23
298	299	302	305	300	302	300	302	300	298	03	23	316	09	02	268	24
299	299	300	305	302	302	302	300	302	294	17	50	308	09	15	272	25
300	300	299	301	304	304	301	300	303	295	00	09	304	05	20	279	26
301	303	303	305	305	303	304	305	305	296	01	07	310	08	20	276	27
298	299	299	300	300	305	300	299	299	296	19	23	306	12	25	285	28
300	300	302	302	305	307	306	302	306	295	20	05	312	06	02	260	29
298	299	300	301	301	301	301	301	301	295	00	01	305	06	00	276	30†
299	299	300	301	301	302	303	303	305	297	01	11	307	06	00	277	31†
298	298	300	302	302	303	302	302	302	296						38	Mean
301	301	302	305	304	304	304	303	304								Mean†
295	296	299	299	299	302	299	298	298								Mean††

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record: (day omitted for means).

TABLE 14

## Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

February

2,000γ plus tabular quantities

		Hours G. M. T.														
Date		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1		306	302	297	290	278	265	254	252	254	265	267	275	281	284	291
2		301	301	302	300	276	265	259	255	265	269	273	282	289	291	294
3		303	300	294	290	282	279	279	282	285	290	291	300	291	289	302
4		307	302	307	294	290	278	282	280	276	268	282	289	294	296	302
5		304	307	304	302	298	296	295	292	285	283	286	278	270	289	295
6		304	303	294	297	301	292	288	283	290	289	290	289	289	294	301
7†		308	304	304	303	302	294	289	282	277	271	271	277	285	291	300
8		303	303	301	300	296	297	297	286	279	273	273	276	276	290	296
9†		300	294	294	296	297	292	286	279	273	268	266	272	284	296	301
10†		303	302	297	301	297	291	284	291	286	288	285	285	283	290	292
11		301	300	295	290	290	292	295	297	298	292	288	277	278	290	294
12		302	302	304	306	306	307	300	297	298	300	296	291	290	292	298
13		303	306	304	303	297	295	291	290	290	285	280	280	283	297	290
14††		284	288	284	291	304	Δ	Δ	Δ	280	273	268	265	270	274	284
15		291	292	291	292	291	290	289	284	284	289	292	291	290	288	280
16††		296	296	289	291	289	282	280	280	284	290	308	294	284	284	284
17††		294	292	295	298	297	285	286	257	256	273	281	278	281	292	289
18††		297	295	291	296	292	285	291	291	296	291	284	285	281	286	290
19		299	299	295	289	289	280	272	268	273	269	273	277	277	285	291
20		292	295	291	296	289	274	273	279	274	273	280	285	286	290	291
21††		297	295	286	290	288	292	281	274	287	291	288	281	284	288	293
22		298	298	300	308	305	298	291	279	276	276	274	274	274	284	291
23		297	298	298	302	298	284	272	264	261	264	267	274	279	281	287
24†		299	299	298	298	298	286	266	256	255	256	276	272	279	285	291
25†		297	298	298	300	293	274	258	251	246	249	263	273	281	275	288
26		299	301	299	298	292	281	264	264	270	276	282	286	289	294	292
27		297	297	297	295	294	285	270	273	263	257	263	273	285	291	289
28		300	297	298	303	307	285	268	258	252	258	273	280	286	287	292
29		299	299	299	309	317	310	286	275	269	270	275	281	291	293	294
Mean		300	299	297	298	295	287	280	276	275	276	276	281	284	289	289
Mean†		301	299	298	300	297	287	277	272	267	266	272	276	282	287	294
Mean††		296	294	290	294	292	286	284	276	281	286	290	284	282	288	289

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 14  
 Hourly values of Vertical Force, 1960  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 February 2,000γ plus tabular quantities

Hours G. M. T.									Maximum		Minimum		Range	Date	
Mean															
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.		
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
296	296	296	299	302	302	303	301	301	286	00 01	306	07 20	248	58	1
289	293	288	290	281	303	311	305	306	287	20 33	312	07 00	254	58	2
298	298	295	297	306	310	304	304	304	295	19 45	313	06 12	278	35	3
302	301	302	302	301	297	304	306	304	294	19 39	309	08 56	266	43	4
297	292	302	306	308	304	306	309	309	297	18 25	312	12 08	266	46	5
301	301	294	302	306	306	304	304	308	297	23 00	308	06 47	280	28	6
301	301	301	302	302	303	303	303	303	295	00 01	308	09 00	271	37	7†
295	296	296	294	300	300	301	300	301	293	01 05	304	09 05	272	32	8
301	301	302	301	301	302	303	303	303	292	21 22	307	10 00	266	41	9†
292	292	294	295	297	300	301	300	300	294	00 01	303	05 45	278	25	10†
296	295	291	295	296	301	301	302	303	294	22 52	304	10 52	273	31	11
301	300	301	303	302	302	301	302	303	300	04 35	309	12 00	290	19	12
290	289	290	294	295	290	284	286	282	291	01 00	306	09 30	278	28	13
284	290	296	292	294	307	301	294	291	Δ	Δ	Δ	Δ	Δ	Δ	14††
280	286	296	295	291	296	297	297	297	290	17 15	302	14 45	278	24	15
271	288	294	296	297	298	295	295	296	290	09 53	314	15 00	259	55	16††
284	291	290	286	292	297	299	307	298	287	21 46	309	07 16	249	60	17††
293	287	292	296	297	296	297	297	297	283	18 20	302	06 25	281	21	18††
290	289	291	301	293	286	303	297	291	287	20 47	309	07 07	265	44	19
292	292	297	293	297	297	297	297	297	289	16 28	301	06 00	271	30	20
292	292	304	298	298	299	302	298	298	287	16 48	306	06 35	272	34	21††
292	292	294	297	298	298	298	298	297	291	03 15	310	10 25	273	37	22
287	292	296	293	294	297	297	298	299	287	03 20	304	08 52	260	44	23
293	294	294	296	296	297	297	296	297	286	01 08	303	08 15	254	49	24†
293	293	293	297	295	295	295	298	300	283	03 00	301	07 36	245	56	25†
292	293	293	299	298	298	299	299	298	290	01 00	305	06 10	262	43	26
297	294	293	299	299	297	299	300	303	288	23 25	309	09 05	256	53	27
294	293	295	298	299	299	299	299	299	288	03 42	311	07 30	251	60	28
292	292	298	298	299	288	294	294	298	293	04 18	321	07 10	268	53	29
293	294	295	297	298	299	296	300	300	291					41	Mean
296	296	297	298	298	299	300	300	301							Mean†
285	290	295	294	296	298	298	299	297							Mean††

† Five International quiet days.  
 †† Five International disturbed days.  
 Δ Loss of record; (day omitted for means).

TABLE 15  
Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

2,000γ plus tabular quantities

March

Hours G. M. T.															
Date	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1	299	303	301	297	292	275	262	266	255	261	269	280	286	288	292
2††	302	303	306	309	303	291	280	286	276	272	275	286	282	284	291
3††	302	296	296	300	294	292	282	275	280	292	286	298	293	293	287
4	304	304	298	298	292	282	278	274	270	274	275	279	281	280	291
5	298	298	297	298	294	287	281	276	279	287	287	286	291	292	294
6	304	304	303	305	297	281	269	260	253	254	256	269	281	286	289
7†	295	298	302	299	293	283	271	268	266	267	268	273	281	290	292
8	299	303	304	305	303	297	279	267	268	267	262	263	271	279	286
9	304	303	299	301	298	297	287	289	295	291	291	287	289	289	293
10	297	298	297	299	295	285	279	272	267	254	265	287	291	291	292
11††	301	298	302	305	302	286	279	278	279	289	290	268	279	290	291
12	303	304	296	285	274	256	249	248	254	257	269	274	284	292	294
13†	299	302	299	292	281	268	255	245	245	249	262	275	286	291	293
14	298	302	300	297	293	285	274	264	258	258	264	274	285	291	292
15	303	303	305	308	303	291	281	278	273	263	266	272	275	284	287
16††	304	291	296	316	324	316	303	312	308	299	298	293	291	290	297
17	302	299	303	305	304	297	290	279	274	274	282	287	285	292	292
18	298	300	304	304	298	284	281	279	280	276	280	286	290	292	294
19	300	299	304	311	309	291	275	263	256	255	258	266	275	281	290
20†	299	302	303	306	299	289	281	275	275	275	279	287	292	293	292
21	299	298	303	305	306	299	293	283	281	286	297	294	289	288	288
22†	297	299	299	299	299	299	294	288	287	285	285	288	288	288	293
23†	301	303	301	307	306	293	283	285	288	289	292	293	291	288	292
24	303	303	298	295	292	281	264	257	257	258	276	282	285	289	293
25	297	300	297	293	282	268	257	256	259	269	273	276	281	287	292
26	300	300	298	297	288	279	272	268	269	281	291	291	285	287	287
27	300	302	303	308	297	281	269	267	269	276	282	284	285	290	292
28	300	304	311	316	310	302	286	274	269	258	262	264	278	292	294
29	294	300	303	292	290	284	276	262	234	261	273	280	282	292	294
30	300	308	312	315	315	297	277	269	267	271	281	291	292	292	292
31††	303	311	307	296	291	278	261	255	261	280	297	297	284	283	296
Mean	300	301	302	302	298	287	276	272	269	272	277	282	285	289	292
Mean†	298	301	301	301	296	286	277	272	272	273	277	283	288	290	292
Mean††	302	302	301	305	303	293	281	281	281	286	289	288	286	288	292

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 15  
Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

March

2,000γ plus tabular quantities

Hours G. M. T.									Maximum			Minimum			Date
Mean									Range						
15	16	17	18	19	20	21	22	23	Time	Mag.	Time	Mag.			
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	H. M.	Y	H. M.	Y	Y	
293	293	292	297	297	303	297	298	298	287	20 09	306	08 10	251	55	1
294	294	296	298	293	296	298	305	304	293	02 15	310	08 42	268	42	2††
282	296	305	304	303	299	302	302	304	294	17 00	305	07 06	274	31	3††
293	292	292	293	298	303	304	305	306	290	22 25	310	08 05	269	41	4
297	299	299	304	298	294	296	300	304	293	17 57	308	07 30	274	34	5
291	291	291	295	297	302	297	297	297	286	03 13	308	08 44	248	60	6
293	293	296	297	297	296	297	297	299	288	01 35	303	08 00	266	37	7†
289	290	295	301	303	303	304	303	301	289	03 24	309	09 46	261	48	8
287	293	297	296	297	297	296	297	297	295	00 01	304	10 17	283	21	9
291	292	292	291	296	301	297	302	303	289	19 35	305	09 35	249	56	10
297	297	291	295	296	301	299	299	299	292	03 03	308	11 27	265	43	11††
294	294	293	296	299	302	300	300	300	284	00 40	307	06 58	246	61	12
294	296	297	298	298	296	297	298	298	284	18 05	303	07 30	244	59	13†
296	296	297	298	298	298	298	298	303	288	23 18	304	08 18	256	48	14
285	285	282	284	292	298	296	297	294	288	03 00	308	09 15	261	47	15
299	297	296	298	284	305	298	297	303	301	04 10	327	19 10	280	47	16††
297	298	298	298	303	304	300	298	298	294	03 10	306	08 45	268	38	17
297	298	300	298	300	300	300	299	300	293	03 12	305	06 04	264	41	18
290	292	300	304	304	303	302	300	300	289	03 12	316	09 10	254	62	19
293	295	298	299	299	299	299	299	300	293	03 11	309	07 00	275	34	20†
294	299	300	300	301	300	301	300	298	296	03 54	309	08 00	281	28	21
294	298	298	298	298	299	299	299	299	295	03 00	301	08 35	283	18	22†
293	297	298	298	300	299	299	303	305	296	03 03	311	06 10	280	31	23†
297	293	293	295	303	298	298	303	300	288	19 07	306	07 30	253	53	24
294	297	297	299	299	299	300	300	299	286	01 00	301	06 34	259	42	25
292	294	295	298	298	298	298	298	299	290	00 01	301	07 05	267	34	26
292	293	294	297	298	298	297	298	300	290	03 18	311	07 00	267	44	27
292	290	286	298	298	303	304	299	296	291	03 17	318	08 56	256	62	28
293	297	298	299	299	298	298	298	300	287	01 36	304	08 00	231	73	29
293	293	287	293	293	295	295	303	302	293	03 20	319	07 36	266	53	30
303	295	256	295	315	327	317	319	299	293	21 48	367	17 23	244	123	31††
293	294	294	297	299	300	299	300	300	291				47		Mean
293	296	297	298	298	298	299	299	300							Mean†
295	296	289	298	298	306	303	304	302							Mean††

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).



TABLE 16

## Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

2,000γ plus tabular quantities

April

April		Hours G. M. T.														
Date		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1††		296	281	280	292	279	273	273	304	338	342	296	276	267	255	273
2		318	304	302	291	290	291	288	289	297	312	308	317	326	326	317
3††		326	325	306	301	289	281	255	266	289	293	290	285	290	293	297
4		306	313	314	314	308	292	276	270	274	276	288	289	289	290	294
5		300	310	310	297	283	253	246	251	258	252	264	273	277	288	291
6		304	310	303	299	296	282	268	262	262	282	290	294	291	291	292
7		300	309	309	300	290	276	273	262	267	278	286	287	286	288	290
8		300	306	297	290	284	274	269	254	273	278	286	287	289	296	297
9†		301	308	299	295	290	276	265	267	273	273	284	286	288	292	292
10		266	260	260	294	284	259	247	239	247	260	265	282	276	275	283
11		306	302	309	304	296	282	270	271	277	282	289	295	292	290	295
12		294	304	306	297	283	273	259	262	257	275	292	295	291	286	285
13		304	305	297	286	282	261	253	258	267	282	289	286	288	289	283
14		295	305	318	321	312	303	291	279	272	273	281	282	285	284	286
15		294	303	297	290	278	247	247	253	255	265	277	283	290	289	286
16		295	298	295	290	286	278	266	252	250	253	259	266	266	267	279
17		294	302	298	295	296	290	274	266	267	267	273	287	291	292	292
18		297	302	298	292	290	279	267	255	269	275	273	272	280	286	291
19†		297	303	305	306	304	291	280	270	268	270	278	285	288	290	290
20†		300	305	304	294	287	280	268	262	261	261	270	283	292	293	292
21†		299	305	305	298	293	281	266	257	260	269	274	282	286	289	290
22†		301	304	304	295	286	275	273	259	268	278	288	294	295	294	290
23		305	306	306	293	283	273	265	260	270	272	283	295	296	296	294
24††		289	294	283	278	278	261	252	249	255	271	288	289	295	292	296
25		297	308	322	303	288	276	266	248	270	261	285	285	288	292	296
26		308	308	308	298	289	277	272	265	269	274	286	299	304	304	298
27		309	310	301	290	286	275	266	262	267	274	285	295	298	298	297
28††		315	296	297	295	275	268	261	243	245	250	272	287	287	293	296
29		314	313	323	314	303	283	273	263	273	275	287	295	286	298	297
30††		311	314	Δ	Δ	308	286	274	266	263	271	284	297	305	284	249
Mean		301	303	302	297	289	276	267	262	269	275	282	287	289	290	292
Mean†		300	305	303	298	292	281	270	261	266	270	279	286	290	292	291
Mean††		306	299	292	292	280	271	260	266	282	289	269	284	285	283	290

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 16

## Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

April

2,000γ plus tabular quantities

Hours G. M. T.									Maximum			Minimum			Date
Mean									Range						
15	16	17	18	19	20	21	22	23	Time	Mag.	Time	Mag.			
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
254	241	300	285	301	328	306	330	324	291	19 33	370	16 17	230	140	1††
329	329	312	312	311	309	308	309	315	309	12 18	337	06 53	283	54	2
297	300	303	303	303	306	306	303	303	296	00 40	337	05 55	251	86	3††
294	295	301	298	302	301	300	308	302	296	02 35	319	07 00	270	49	4
291	293	289	297	299	303	303	300	300	284	01 51	311	08 50	239	72	5
292	298	309	300	300	298	298	297	297	292	16 33	318	07 50	256	62	6
294	288	292	281	287	297	299	305	308	290	22 15	310	07 05	261	49	7
297	297	301	299	301	299	299	299	301	291	00 52	309	06 58	250	59	8
294	296	297	300	300	300	300	301	301	291	00 50	309	06 25	260	49	9†
294	284	296	307	313	294	284	289	294	277	18 33	320	07 07	236	84	10
294	290	295	298	300	300	295	298	296	293	02 02	312	06 10	269	43	11
293	294	297	297	299	299	298	300	304	289	01 46	308	06 05	253	55	12
292	293	299	297	297	303	298	295	294	288	01 00	305	05 36	233	72	13
291	291	294	298	296	293	294	298	296	293	03 05	322	08 20	260	62	14
290	291	293	293	295	293	292	292	293	283	01 15	304	05 10	236	68	15
268	270	291	296	301	297	303	296	296	280	20 36	306	06 55	249	57	16
292	295	295	293	291	292	303	301	295	289	00 50	303	06 50	262	41	17
291	292	298	298	298	298	297	297	293	287	00 52	303	06 45	254	49	18
292	293	294	296	296	296	296	296	298	291	02 00	305	08 00	268	37	19†
293	294	297	297	299	298	298	297	297	288	01 20	306	08 45	259	47	20†
294	295	300	300	300	299	298	299	300	289	01 25	306	07 00	257	49	21†
293	294	296	300	298	300	300	299	300	291	01 30	306	06 45	258	48	22†
295	295	296	297	305	302	294	296	302	291	01 30	307	06 40	257	50	23
303	307	307	306	307	302	308	315	307	289	22 58	320	06 12	248	72	24††
308	300	312	309	301	307	307	308	308	294	01 42	328	06 35	241	87	25
299	299	298	304	305	305	307	307	307	295	01 14	310	07 05	262	48	26
298	301	303	305	305	311	308	302	311	294	23 36	326	06 30	261	65	27
298	298	304	307	310	327	322	316	311	291	20 17	333	07 20	231	102	28††
299	308	308	309	309	308	309	309	310	299	01 50	327	07 30	256	71	29
257	305	281	257	280	308	320	334	329	Δ	Δ	Δ	Δ	Δ	Δ	30††
294	294	299	299	301	302	301	302	302	291				63		Mean
293	294	297	299	299	299	298	298	299							Mean†
288	286	304	300	305	316	310	316	311							Mean††

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means.)

TABLE 17

## Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

2,000γ plus tabular quantities

May

May	Hours G. M. T.															
Date	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
1††	332	329	323	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
2	309	317	320	323	317	308	297	287	285	284	286	297	307	307	304	
3	310	312	313	313	301	290	283	274	266	262	262	273	285	296	299	
4†	310	310	308	303	297	290	296	285	292	293	293	297	298	298	298	
5	309	310	304	296	286	283	273	272	278	284	287	296	298	297	298	
6††	309	313	309	311	297	295	295	286	281	277	275	283	286	286	293	
7††	310	310	316	299	292	279	273	284	293	299	295	299	309	297	285	
8††	310	310	307	298	297	299	290	281	296	271	267	298	296	278	272	
9	327	319	313	310	299	298	296	285	289	301	310	305	297	297	297	
10	310	311	307	308	302	295	284	276	279	286	298	302	301	298	298	
11	316	313	309	303	295	284	266	278	273	302	317	310	304	296	296	
12	309	316	318	309	290	266	260	273	273	284	290	285	294	296	298	
13	312	315	304	286	273	261	232	236	250	260	270	283	295	297	296	
14	308	309	309	301	288	279	272	261	261	261	282	295	297	296	296	
15	308	312	314	309	303	292	283	276	272	270	274	284	291	297	297	
16	308	310	308	300	290	282	273	271	274	280	276	285	296	302	312	
17	303	308	312	308	304	297	297	302	304	304	308	310	308	297	291	
18†	309	308	302	296	296	290	282	279	286	290	288	292	295	297	297	
19†	309	315	315	308	304	309	310	321	322	331	331	321	310	307	301	
20†	312	315	315	312	307	286	276	271	276	284	284	285	295	296	297	
21	309	310	308	312	309	303	295	285	288	288	292	297	298	300	298	
22†	307	308	307	298	298	294	293	289	286	283	283	288	293	295	296	
23	302	307	301	293	290	280	272	269	269	276	282	290	291	293	294	
24	306	308	296	289	290	288	265	249	268	268	274	285	290	296	295	
25	313	313	314	305	288	281	275	263	258	263	275	286	289	288	287	
26	303	310	300	291	283	274	271	271	273	280	283	286	291	295	295	
27	308	308	301	297	298	285	272	266	267	267	267	279	284	286	290	
28	300	308	306	301	296	286	279	272	267	273	283	288	290	292	289	
29††	296	308	320	321	291	283	275	266	271	283	296	295	295	296	288	
30	309	313	308	303	299	294	285	281	281	277	283	287	283	285	284	
31	302	301	291	282	272	265	259	258	262	269	281	288	293	293	293	
Mean	308	311	308	303	295	287	279	275	278	282	287	293	296	295	295	
Mean†	309	311	309	303	300	294	291	289	292	296	296	297	298	299	298	
Mean††	306	310	313	307	294	289	283	279	285	283	283	294	297	289	285	

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 17

## Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

2,000γ plus tabular quantities

May

May

Hours G. M. T.										Maximum		Minimum		Range		Date
Mean										Time Mag.		Time Mag.				
15	16	17	18	19	20	21	22	23								
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ		
Δ	Δ	Δ	Δ	309	309	309	310	309	Δ	Δ	Δ	Δ	Δ	Δ		1††
304	308	309	310	309	310	310	309	309	305	03 12	327	09 27	279	48		2
299	303	307	309	309	310	309	305	305	296	03 00	314	09 25	261	53		3
299	302	305	307	305	303	301	303	307	300	00 01	310	06 25	284	26		4†
304	304	307	308	308	307	309	308	305	297	01 00	311	07 00	272	39		5
303	308	309	314	297	303	307	314	308	298	22 04	326	08 36	274	52		6††
291	305	297	313	309	308	308	308	308	299	01 57	323	05 40	262	61		7††
273	295	305	317	327	323	315	317	314	298	23 34	345	09 29	237	108		8††
298	304	309	309	310	311	310	310	310	305	00 01	327	07 03	279	48		9
298	304	305	309	309	309	309	308	309	301	00 30	313	07 00	276	37		10
300	304	308	309	308	307	307	309	309	301	09 35	320	05 46	260	60		11
300	306	307	310	310	310	309	308	308	297	01 31	319	05 55	256	63		12
296	300	301	303	303	307	307	304	306	287	00 45	316	06 00	223	93		13
296	302	307	309	308	308	308	308	308	295	01 02	312	06 58	260	52		14
300	304	306	307	310	307	306	306	307	297	02 30	315	08 50	267	48		15
302	298	300	307	309	313	333	318	321	299	20 45	350	07 10	268	82		16
297	300	304	308	308	308	308	308	308	308	01 58	318	13 45	288	30		17
298	303	304	307	307	308	308	308	307	298	00 30	310	06 46	276	34		18†
303	307	307	308	307	306	307	307	309	311	08 45	332	14 00	301	31		19†
301	307	308	308	307	307	308	308	308	299	00 45	316	07 00	271	45		20†
302	306	308	308	308	307	308	308	304	302	03 00	315	08 40	284	31		21
306	307	306	306	307	306	305	305	306	299	14 45	310	09 43	282	28		22†
296	292	294	294	297	296	312	304	305	292	20 50	316	07 44	268	48		23
298	300	302	304	304	310	308	303	313	292	23 45	315	07 17	248	67		24
293	298	299	300	300	299	299	299	300	291	01 45	315	07 30	256	59		25
296	297	299	302	298	298	301	301	302	292	00 52	311	04 45	270	41		26
292	294	296	296	298	297	297	297	297	289	01 12	309	08 06	262	47		27
292	295	296	296	297	303	319	298	298	293	02 30	324	08 08	265	59		28
284	284	288	295	296	294	294	296	297	292	02 38	344	06 50	247	97		29††
287	285	288	291	294	295	297	297	297	292	01 00	313	08 50	275	38		30
290	290	294	294	294	294	294	296	294	285	00 33	303	07 12	257	46		31
296	300	302	305	305	306	307	305	306	297					52		Mean
301	305	306	307	307	306	306	306	307								Mean†
288	298	300	310	307	307	306	309	309								Mean††

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 18  
 Hourly values of Vertical Force, 1960  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 2,000γ plus tabular quantities

June

Hours G. M. T.															
Date	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1	293	300	295	290	286	280	262	259	265	275	274	272	281	284	294
2†	301	306	306	305	298	295	290	286	283	278	274	281	286	287	288
3	296	302	307	311	311	307	296	286	286	293	304	305	300	293	289
4††	294	300	306	316	313	266	276	311	270	284	271	274	283	284	281
5	296	295	298	307	307	307	293	276	272	271	275	277	288	287	294
6	301	305	305	301	290	287	282	274	272	276	277	271	282	288	290
7	299	310	308	300	293	282	282	277	281	274	272	282	290	289	286
8	295	298	292	288	286	274	274	281	288	288	290	281	282	284	292
9	295	300	296	283	270	259	259	266	270	269	271	275	287	293	289
10†	298	295	286	286	293	293	293	294	294	292	294	298	296	293	289
11†	300	302	294	292	290	277	270	269	276	289	290	288	293	293	288
12†	295	300	298	296	288	282	280	276	284	286	283	286	289	290	288
13	298	302	307	312	306	298	289	282	276	276	281	283	289	287	284
14	298	302	299	302	305	290	274	259	274	282	288	289	282	286	282
15	300	306	305	304	295	286	274	269	263	268	286	294	294	290	288
16†	300	298	294	286	280	276	271	272	278	275	274	276	283	288	288
17	295	298	300	305	299	283	279	275	282	282	288	292	293	291	286
18	295	295	293	295	291	286	274	274	281	282	283	280	285	289	288
19	298	300	295	297	289	275	274	265	267	273	280	281	282	288	285
20	301	299	293	291	286	281	276	274	277	281	280	281	287	285	283
21	297	305	304	297	293	294	284	278	278	286	287	290	288	292	293
22	304	305	308	306	296	281	279	274	268	268	273	279	280	281	282
23	293	300	296	297	294	293	300	294	294	291	287	288	287	284	284
24	294	296	293	294	292	292	288	280	275	278	282	290	293	288	284
25	296	302	299	293	291	284	275	269	272	270	272	278	279	280	281
26	294	296	294	292	291	279	267	266	278	296	308	309	304	293	291
27††	292	293	298	284	269	268	291	303	284	281	284	296	293	287	286
28††	303	304	304	299	302	293	299	284	273	275	275	263	268	274	280
29††	292	293	292	302	298	297	292	294	281	285	288	292	292	286	281
30††	286	296	300	293	312	306	291	280	280	278	279	284	287	282	284
Mean	297	300	299	297	294	286	281	278	277	280	282	285	287	287	287
Mean††	299	300	296	293	290	285	281	279	283	284	283	286	289	290	288
Mean††	293	297	300	299	299	286	290	294	278	281	279	282	285	293	282

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 18  
Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

June

2,000γ plus tabular quantities

Hours G.M.T.										Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23	Mean	Time	Mag.	Time	Mag.		
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
300	302	302	302	298	295	300	298	298	288	01 05	302	06 25	257	45	1
289	293	294	295	294	294	294	294	295	292	01 20	307	09 56	270	37	2†
293	295	298	295	294	294	294	295	294	297	03 23	313	07 09	284	29	3
286	295	294	296	298	298	299	293	294	291	02 55	330	07 10	250	80	4††
298	300	299	299	301	306	301	301	301	294	03 14	310	09 02	268	42	5
294	294	295	296	298	298	298	298	298	290	01 35	306	11 10	269	37	6
276	292	293	294	300	296	294	294	295	290	01 00	310	09 25	270	40	7
290	290	294	293	293	293	290	296	301	289	22 45	306	04 40	270	36	8
290	294	295	298	298	295	294	294	295	285	01 30	305	05 50	257	48	9
293	294	294	294	295	295	294	294	295	293	00 29	299	02 30	283	16	10†
290	290	290	292	292	293	292	292	294	289	00 35	305	06 54	266	39	11†
289	290	292	292	294	293	294	295	296	290	00 40	302	07 00	275	27	12†
286	287	290	293	294	294	294	294	298	292	03 00	314	08 05	274	40	13
294	296	299	301	299	298	296	296	298	291	03 22	308	07 00	257	51	14
293	294	294	294	295	295	296	295	296	291	01 25	307	08 35	258	49	15
288	292	293	293	293	292	292	294	295	286	00 25	301	06 30	269	32	16†
287	285	285	288	293	294	294	293	294	290	03 10	306	06 35	271	35	17
295	300	301	300	300	303	299	300	299	291	19 20	305	06 15	270	35	18
287	293	293	293	293	293	295	293	297	287	00 56	303	06 48	264	39	19
288	292	295	295	293	293	293	293	294	288	00 25	304	07 15	273	31	20
294	292	293	296	294	296	297	297	298	293	01 45	307	07 15	274	33	21
286	291	292	293	294	293	296	294	292	288	02 00	308	08 00	268	40	22
287	287	287	287	291	292	294	294	297	292	00 30	304	13 00	284	20	23
287	288	291	288	291	296	292	292	293	289	00 52	298	07 30	274	24	24
284	286	293	288	284	284	290	292	294	285	00 35	304	06 45	268	36	25
290	291	292	294	294	293	292	293	291	291	10 15	311	06 25	260	51	26
288	291	297	294	292	294	296	296	299	290	01 50	311	05 00	263	48	27††
282	286	288	291	296	293	296	292	292	288	01 15	310	11 20	258	52	28††
284	285	288	290	292	304	300	304	291	292	21 42	311	07 48	280	31	29††
286	290	291	304	297	296	291	296	293	291	17 53	315	08 45	275	40	30††
289	292	293	294	295	295	295	295	296	290					39	Mean
290	292	293	293	293	293	293	294	295							Mean†
285	289	292	295	295	297	296	296	294							Mean††

† Five International quiet days.

†† Five International disturbed days.

Δ Loss of record; (day omitted for means).

TABLE 19  
Principal Magnetic Storms  
January-June 1960

January-June 1960															
Observatory	Greenwich Day 1960	Storm Time		Sudden commencements			C-figure Degree of Ac- tivity(iv)	Maximal activity on K-scale 0 to 9			Ranges				
		G.M.T. of begin- ning	G.M.T. of ending (i)	Type (ii)	Amplitude(iii)			Green- wich Day	Green- wich 3 hr. index	K- index	D.	H.	Z.		
					D.	H.								Z.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Astrophysical Observatory Kodaikanal		h.	m.	d.	h.		Y	Y					Y	Y	
	January 10	07	15	11	17	S.C.	3	18	37	ms	10	..	4	282	58
	January 13	19	01	15	16	S.C.	<1	38	17	m	14	..	7	218	67
	January 17	12	27	18	22	...	..	..	..	ms	18	..	8	280	52
	January 21	00	32	22	11	...	..	..	..	m	21	..	6	210	53
	February 16	09	20	18	10	...	..	..	..	m	16	..	6	247	69
	March 15	12	25	16	23	...	..	..	..	m	16	..	3	213	52
	March 31	08	43	2nd	13	...	..	..	..	s	1st April	..	16	649	144
	April 2	23	12	5	09	S.C.	<1	18	19	ms	3	..	5	390	82
	April 10	01	25	12	11	S.C.	1	22	10	ms	10	..	6	307	80
	April 16	13	06	17	08	S.C.	<1	13	9	m	16	..	4	241	35
	April 23	19	31	25	23	...	..	..	...	ms	24	..	5	279	75
	April 27	20	02	28	21	S.C.	<1	31	15	ms	28	..	7	263	92
	April 30	12	14	1st	10	S.C.	3	105	52	s	30	..	13	529	150
				May											
	May 6	03	26	7	18	...	..	..	..	ms	6	..	6	266	57
	May 8	04	20	9	12	S.C.	2	62	23	ms	8	..	8	384	104
	May 16	13	55	17	14	S.C.	1	39	20	m	16	..	4	214	58
	May 28	20	18	30	10	S.C.	<1	43	22	m	29	..	5	224	92
	June 4	02	52	6	12	S.C.	1	71	29	m	4	..	3	239	79
	June 27	01	45	28	13	S.C.	<1	56	22	ms	27	..	4	282	59
	June 29	19	38	1st	14	S.C.	<1	31	20	ms	30	..	6	263	68
			July												

The following symbols and conventions have been used according to recognised practice:—

(i) Approximate time of ending of storm construed as the time of cessation of reasonably marked disturbance movements in the traces.

(ii) S.C.=Sudden commencement; (...)=Gradual Commencement.

(iii) Signs of amplitudes of 'D' and 'Z' taken algebraically (D=reckoned negative being westerly).  
(Z=reckoned positive being vertically downwards).

(iv) Storm described by three degrees of activity; (m)—for moderate (when range is less than 250γ)  
(ms)—for moderately severe (when range is between 251γ and 400γ),  
(s)—for severe (when range is above 400γ).

**IONOSPHERIC DATA**



Characteristic : fo F2  
Unit : Mc  
Month : January, 1960

TABLE 1  
Ionospheric Data  
75°E Mean Time

Latitude : 10·2° N  
Longitude : 77·5 E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	C	F	8·4	6·7	5·1	3·6	C	C	11·1	11·2	10·2	10·7
2	F	F	F	F	5·4	3·1	4·5	8·7	10·9	10·8	9·9	9·8
3	10·8	F	F	7·5	6·6	4·3	4·8	9·1	11·3	12·1	11·7 <sub>H</sub>	10·6
4	9·7	8·7	7·6	6·0	4·8	3·2	4·5	8·6	10·8	11·1	10·6	10·7
5	9·0	8·4	7·1	6·1	5·7	5·1	5·3	9·3	11·3	11·8	11·2	11·7
6	7·1	6·4	6·5	U6·0s	5·4	4·0	5·3	9·4	11·8	12·1	12·4	12·0
7	10·4	9·8	8·5	7·4	7·2	6·5	5·7	9·3	11·4	12·1	11·6	10·8
8	8·4 <sub>F</sub>	8·6	9·0	8·3	F	5·9	4·9	8·8	10·8	11·6	12·6	12·7
9	F	F	F	F	5·5 <sub>F</sub>	F	6·7 <sub>F</sub>	U10·0 <sub>F</sub>	11·2	12·3	13·6	13·0
10	U7·6 <sub>F</sub>	6·8 <sub>F</sub>	F	F	F	U5·4 <sub>F</sub>	6·2	9·5	11·3	12·4	12·3	12·6
11	9·8	U9·0 <sub>F</sub>	8·8	7·6	U7·8s	J7·4s	7·5	8·0	9·6	10·6	11·1	11·6
12	FS	U9·4 <sub>F</sub>	F	6·9	6·3	4·5	4·3	8·7	10·4	10·7	10·8	11·4
13	9·1 <sub>F</sub>	8·5	7·8	6·9	5·2	4·6	4·8	8·1	9·9	10·1	10·2	10·8
14	9·7	8·3	7·2	6·4	J6·4s	J5·9s	6·3	9·0	11·2	11·4	11·1	11·8
15	10·0	6·7	U6·2s	U3·3s	2·3	2·2	U4·4s	7·7	10·6	C	C	12·2
16	F	F	FS	4·8	J3·0 <sub>F</sub>	E	3·6	7·8	9·1	9·5	9·5	9·8
17	F	F	F	U6·5 <sub>F</sub>	4·8	3·7	4·4	8·3	U9·8s	C	C	C
18	11·4	10·4	8·3	6·8	5·2	3·5	U4·2 <sub>C</sub>	8·7	10·6	10·7	10·4	10·3
19	9·0	8·3	6·6	5·8	4·4	3·3	U4·4 <sub>R</sub>	9·0	11·2	11·5	10·8	10·3
20	9·4	9·2	8·5	6·8	U6·4s	5·0	4·3	8·7	11·0	11·2	10·4	10·3
21	10·5	8·0	5·6	3·9	2·5	2·7	4·0	7·8	9·7	11·6	C	12·0
22	U9·3s	J10·1s	7·8	8·0	U6·8s	5·2	4·7	U9·2s	11·0	12·1	12·9	12·7
23	8·5	7·4	7·1	U7·6s	7·8	6·7	5·6	9·0	11·0	11·8	11·6	C
24	8·0	8·6	8·0	7·9	7·8	U7·4s	6·6	U9·7s	12·4	13·3	13·2	13·4
25	6·8	F	F	7·0	7·6	7·2	6·0	9·6	11·8	12·1	10·9	10·6
26	U7·3 <sub>F</sub>	F	U7·6 <sub>F</sub>	F	5·6	5·6	5·2	9·0	11·0	11·6	11·2	11·1
27	F	F	F	U7·8s	6·5	4·9	4·6	8·6	11·0	11·6	10·8	11·0
28	F	F	F	F	F	3·1	U4·0 <sub>R</sub>	U7·9s	U9·9s	10·8	11·2	11·6
29	F	F	F	F	U7·7s	6·2	5·3	U9·4s	11·1	10·8	10·4	10·6
30	F	11·1	F	8·3	5·4	4·0	4·4	8·4	10·4	10·4	10·4	10·3
31	F	F	F	F	F	5·0	4·7	8·6	10·6	10·6	10·4	10·5
Count	20	19	18	24	27	30	30	30	31	29	28	29
Median	9·2	8·6	7·7	6·8	5·6	4·8	4·8	8·8	11·0	11·5	11·0	11·0
Mean	9·1	8·6	7·6	6·7	5·7	4·8	5·0	8·8	10·8	11·4	11·2	11·3

Sweep 1·0 Mc. 25·0 Mc. in 27 seconds.

Characteristic : foF2

Unit : Mc

Month : January, 1960

TABLE 1 (Contd.)

Ionospheric Data

75 0°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
11.6	12.2	12.4	12.8	12.7	U12.3s	11.6	11.1F	F	F	F	F	1
10.3	10.7	11.4	11.9	12.1	11.9	10.9	U9.7s	8.6F	F	F	F	2
10.7	11.4	11.8	12.2	12.1	11.1	9.1	U8.0F	F	F	F	F	3
11.0	10.8	11.2	11.8	12.7	12.9	U12.0s	10.7	10.6	10.2	9.2	8.5	4
11.4	10.3	U9.7s	9.5	10.1	10.1	U9.9s	U9.8F	F	9.6	9.9	8.6	5
11.4	10.9	10.9	11.2	11.3	10.9	10.7	10.2	9.2	9.4	9.4	9.8	6
10.0	10.2	10.8	10.6	10.4	9.7	9.4	8.7F	7.8F	7.2F	7.6	8.1	7
12.7	12.0	10.8	10.1	10.0	9.0	8.4	7.0F	F	F	F	F	8
12.6	11.1	10.8	10.7	11.1	10.9	10.5	U9.0F	F	F	F	F	9
13.0	12.8	13.3	13.4	13.1	12.8	12.4	10.0H	U9.8FH	S	10.4	U10.0F	10
12.7	13.2	13.1	12.5	12.2	11.7	11.3	10.2	U8.6F	F	F	F	11
12.4	13.0	13.4	C	14.0	13.0	U12.0s	11.2	10.4	10.2	U9.3F	U9.5F	12
12.2	13.2	13.8	13.9	13.6	13.0	U11.6SH	8.9	FS	10.9	11.0	10.4	13
12.9	14.0	14.1	13.9	13.3	12.8	12.5	11.6	11.0	10.6	10.8	11.2	14
12.0	11.7	11.8	11.8	11.8	11.6	11.6	U9.6s	F	F	F	F	15
10.2	10.8	11.7	12.4	12.7	13.0	12.6	U11.0F	F	F	F	F	16
C	C	C	C	C	J12.2R	U12.2s	11.2	10.5	U10.0s	10.6	11.5	17
10.8	11.0	10.8	11.4	12.8	12.9	13.2	12.0	U12.2R	U12.2s	11.5	10.6	18
10.6	11.0	11.4	U11.8s	12.4	J12.2s	11.4	U9.6s	U8.2F	F	F	9.5	19
10.6	10.9	10.7	10.8	10.8	10.8	10.7	10.4	U10.2s	U9.8s	F	U10.0s	20
11.5	11.0	11.4	11.9	U12.5s	U11.6s	U11.5s	10.8	10.5	U10.1s	U9.1s	U9.5s	21
11.8	C	11.8	12.2	U12.1s	U11.4s	S	U8.1F	F	J8.2F	8.4	8.6	22
11.7	C	11.7	U11.4w	10.8	U10.4s	C	U8.4w	U8.0WF	C	C	8.4	23
13.2	12.5	10.9	10.0	9.8	9.8	9.4	F	F	F	F	F	24
10.4	10.6	10.8	10.8	10.5	U10.8s	J10.4s	8.5	U7.8F	F	F	F	25
11.2	11.6	11.6	C	U11.8s	U11.8s	J11.3s	U9.6F	F	F	F	F	26
11.0	10.9	11.0	11.1	11.3	U11.4s	U11.2s	9.8	F	F	F	F	27
12.7	13.0	14.0	14.2	14.2	13.8	12.7H	F	F	F	F	F	28
11.0	11.5	12.4	12.8	13.1	13.1	12.8H	11.6FS	F	F	F	F	29
10.7	11.4	12.2	C	C	C	13.0	U11.6s	F	F	F	F	30
10.9	11.8	12.7	13.1	13.0	12.8	U11.6s	10.6	F	F	F	F	31
30	28	30	27	29	30	29	29	15	12	12	15	Count
11.4	11.4	11.6	11.8	12.1	11.8	11.5	10.0	9.8	10.0	9.6	9.5	Median
11.5	11.6	11.8	11.9	12.0	11.7	11.3	10.0	9.6	9.9	9.8	9.6	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F2

Unit : Mc

Month : January 1960

TABLE 1 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	F	F	7.6	5.9	4.3	2.7	C	10.5	11.3	10.9	10.5	11.2
2	F	F	F	6.4	4.4	2.5	6.8	10.0	11.2	10.6	9.7	10.1
3	U10.3F	F	8.1	7.1	5.6	3.2	7.2	10.4	12.0	11.9	10.6	10.7
4	9.1	8.1	6.6	5.1	4.0	2.4	6.8	10.0	11.2	10.7	10.6	10.8
5	8.7	7.9	6.7	6.1	5.6	4.3	7.2	10.6	11.6	11.3	11.5	11.6
6	6.6	6.5	U6.2s	5.8	4.7	3.7	7.8	10.5	12.2	12.7	12.1	11.7
7	U10.0s	9.4	7.9	7.2	6.7	5.9	7.6	10.6	12.0	12.0	11.3	10.4
8	U8.4s	9.1	8.7	7.8	U7.0F	4.7	7.0	10.1	11.3	11.8	12.7	12.7
9	F	F	U6.2F	F	F	U6.0F	U8.7F	U10.7F	11.6	12.8	13.1	12.7
10	U7.2F	U5.8F	F	U5.4F	5.3F	5.4F	8.1	10.3	12.1	12.1	12.5	12.6
11	U9.2s	9.0	8.1	U7.7s	7.4	7.2	8.3H	9.0	10.2	10.7	11.5	12.0
12	F	F	F	6.5	5.0	3.5	6.6	9.7	10.6	10.8	11.0	11.8
13	F	8.6	7.5	6.4	4.7	4.1	6.6	9.3	9.9	10.1	10.6	11.4
14	9.3	7.9	6.8	U6.4s	U6.1s	5.6	7.6	10.2	11.6	11.5	11.4	12.2
15	8.7	6.4	U5.4s	2.8	2.1	3.0	5.6	9.4	11.2	12.0	C	12.0
16	FS	U9.0s	U5.8fs	F	U2.2R	E	5.8	8.6	9.6	9.4	9.8	10.0
17	F	F	F	5.6	J4.3R	3.3	6.8	9.5	C	C	C	C
18	11.3	U9.6s	7.2	6.4	U4.2R	2.8	6.7	10.0	10.6	10.6	10.2	10.6
19	8.6	7.6	5.8	4.6	3.8	2.8	6.8	C	11.5	11.3	10.4	10.3
20	9.4	9.0	7.6	6.8	5.4	3.9	6.7	10.2	11.1	10.8	10.0	10.6
21	F	6.8	5.0	2.9	2.4	2.4	6.6	8.7	11.0	C	C	12.1
22	S	8.8	7.6	U7.6s	J6.1s	4.4	U7.3s	U10.6s	11.6	12.7	12.8	12.3
23	U7.9s	6.9	U7.3s	7.6	7.0	5.8	7.2	10.0	C	11.6	11.7	11.5
24	8.2	8.1	7.9	8.1	U7.5s	7.1	8.1	11.2	13.0	12.7	13.2	13.4
25	F	F	U6.8F	7.0	7.8	6.6	7.7	10.9	12.0	11.6	10.7	10.4
26	F	U7.6F	J6.7F	5.8	5.7	5.0	7.4	10.0	11.4	11.4	11.2	11.0
27	F	F	U8.0s	7.6	U6.2s	4.0	6.9	10.1	11.6	11.1	10.8	10.9
28	F	F	F	U6.1s	3.7	2.9	U6.3s	U9.2s	10.4	11.1	11.3	12.0
29	F	F	F	U8.0F	FS	F	7.5	10.6	10.9	10.6	10.6	10.8
30	F	F	9.7	6.8	4.8	3.3	6.6	U9.8s	10.3	10.5	10.3	10.6
31	U10.4F	F	F	8.0	6.0	4.0	6.8	U9.8s	10.7	10.4	10.4	10.6
Count	16	19	24	29	29	30	30	30	29	29	28	30
Median	8.9	8.1	7.2	6.4	5.3	4.0	7.0	10.0	11.3	11.3	10.9	11.3
Mean	9.0	8.0	7.1	6.4	5.2	4.2	7.1	10.0	11.2	11.3	11.2	11.4

Sweep 1.0 Mc. 25.0 Mc. in 27 seconds.

Characteristic : foF2

Unit : Mc

Month : January 1960

TABLE 1 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
11.9	12.2	12.7	12.8	12.4	U11.5s	U11.4s	F	F	F	F	F	1
10.6	11.1	11.6	12.0	12.2	11.4	U10.4s	9.3	F	F	F	U10.3F	2
11.1	11.8	12.0	12.3	U11.8s	9.6	8.9	F	F	F	F	U9.6F	3
10.9	11.1	11.6	12.3	12.8	12.5	11.2	10.5	10.4	9.4	8.6	8.7	4
11.0	10.1	9.7	9.8	10.2	U10.0s	U9.5F	U10.2F	10.2	9.7	9.9	8.1	5
11.1	10.9	10.9	11.4	11.2	10.9	10.7	9.4	9.0F	U9.4s	9.6	10.3	6
9.9	10.7	11.0	10.4	10.3	9.8	9.2	8.3F	U7.2F	U7.6F	U7.8F	8.5	7
12.4	11.4	10.4	10.0	9.4	8.6	7.7	U6.6F	F	F	F	F	8
12.2	10.8	10.6	10.8	11.0	11.0	U9.5s	U8.0F	F	F	F	FS	9
13.0	12.9	13.0	13.3	13.0	12.5	10.8H	U9.8FH	10.1H	S	U10.4F	U9.8s	10
12.8	13.2	12.8	12.2	12.2	11.6	10.7	F	F	F	F	F	11
12.7	13.1	C	14.0	13.4	12.4	U11.6s	10.9	U10.0H	F	U9.4F	F	12
12.8	13.5	14.0	13.8	13.2	12.2H	S	U9.6s	F	10.9	10.8	10.3	13
13.4	14.2	14.0	13.6	12.8	12.6	S	11.3	10.8	10.8	11.2	10.9	14
C	12.0	11.9	11.9	11.6	U11.7s	10.6	FS	F	F	F	F	15
10.7	11.1	11.8	12.6	13.0	13.0	11.8	F	F	F	F	F	16
C	C	C	C	C	U12.2s	U11.6s	10.8	10.4	U10.2s	11.0	11.5	17
11.0	11.0	11.0	12.2	13.0	13.0	12.8	U11.8s	U12.2R	U11.6s	11.2	U10.0Rs	18
10.8	11.1	11.6	12.0	U12.2s	U11.8s	11.0	U8.5F	F	F	U9.4Fs	U9.6s	19
10.8	10.7	10.8	10.8	11.0	10.8	10.6	U10.4F	U10.0s	U9.6Fs	F	10.6	20
C	11.1	11.6	12.2	12.3	U11.7s	U11.4s	10.7s	10.9	U9.4s	9.1	U9.6s	21
C	U11.7s	12.1	U12.3s	C	U10.7s	8.8	F	F	8.2	8.3	8.8	22
11.8	11.7	C	C	C	U9.8s	C	C	U8.4F	U8.5F	C	7.9	23
13.0	11.6	10.1	10.0	10.0	9.8	U9.0F	F	F	F	F	F	24
10.4	10.6	10.8	10.8	10.8	10.6	9.2	8.0	F	F	F	F	25
11.4	11.6	C	12.0	12.0	U11.6s	U10.6s	F	F	F	F	F	26
10.8	10.8	11.0	11.2	11.2	U11.3s	10.8	F	F	F	F	F	27
12.8	13.6	14.2	14.2	14.1	13.2	11.4H	F	F	F	F	F	28
11.1	11.7	12.7	13.0	13.2	13.0	12.3H	F	F	F	F	F	29
11.0	11.8	12.6	C	C	13.2	12.4	11.0	F	F	F	F	30
11.3	12.0	12.9	13.1	13.0	12.4	11.2	U10.0sF	F	F	F	F	31
27	30	27	28	27	31	28	19	12	12	13	16	Count
11.1	11.6	11.6	12.2	12.2	11.6	10.8	10.0	10.2	9.5	9.6	9.7	Median
11.6	11.7	11.8	12.0	12.3	11.5	10.6	9.7	10.0	9.6	9.7	9.7	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F1  
Unit : Mc  
Month : January 1960

TABLE 2  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1							C	C	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5												
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10												
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14										C	C	L
15												
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20												
21									L	L	L	L
22									L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	LH
25												
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30												
31								L	L	L	L	L
Count							..	..	..	..	..	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F1  
Unit : Mc  
Month : January 1960

TABLE 2 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	L	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
L	L	L	L	L	L							5
L	L	L	L	L								6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L	L							9
L	L	L	L	L								10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
LH	L	L	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
L	L	L	L	L	L							31
..	..	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F1  
Unit : Mc  
Month : January 1960

TABLE 2 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							C	L	L	L	L	L
2							L	L	L	L	L	L
3							L	L	L	L	L	L
4							L	L	L	L	L	L
5												
6							L	L	L	L	L	L
7							L	L	L	L	L	L
8							L	L	L	L	L	L
9							L	L	L	L	L	L
10												
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15												
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	LH	L
25												
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30												
31								L	L	L	L	L
Count							..	..	..	..	..	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F1  
Unit : Mc  
Month : January 1960

TABLE 2 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L								5
												6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L								11
L	L	L	L	L								12
L	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	L	L	L								16
L	L	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L								26
L	L	L	L	L								27
L	L	L	L	L								28
L	L	L	L	L								29
L	L	L	L	L								30
L	L	L	L	L								31
..	..	..	..	..	..	..	..	..	..	..	..	Count
..	..	..	..	..	..	..	..	..	..	..	..	Median
..	..	..	..	..	..	..	..	..	..	..	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : foE

Unit : Mc

Month : January 1960

TABLE 3  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1							C	C	A	A	A	A
2								2.5	A	A	A	A
3								2.6	3.3	A	A	A
4								A	A	A	A	A
5								2.5	A	A	A	A
6								2.5	A	A	A	A
7								2.5	A	A	A	A
8								2.5	3.1	3.4	A	A
9								2.7 <sub>H</sub>	3.2 <sub>H</sub>	3.6	A	A
10								2.4	3.1	3.7 <sub>H</sub>	A	A
11								A	A	A	A	A
12								A	A	A	A	A
13								A	A	A	A	A
14								2.5	A	A	A	A
15								A	A	C	C	A
16								A	A	A	A	A
17								A	A	C	C	C
18								A	A	A	A	A
19								U2.4R	U3.0R	A	A	A
20								2.4	A	A	A	A
21								2.5	3.0	3.3	C	A
22								2.3	A	A	A	A
23								2.3	3.1	A	A	A
24								2.6	A	A	R	A
25								2.5	A	A	A	A
26								A	A	A	A	A
27								2.5	A	A	A	A
28								A	A	A	A	A
29								A	A	A	A	A
30								A	A	A	A	A
31								2.6	A	A	A	A
Count							..	18	7	4	..	..
Median							..	2.5	3.1	..	..	..
Mean							..	2.5	3.1	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

**Characteristic : foE**

Unit : Mc

Month : January 1960

TABLE 3 (Contd.)

## Ionospheric Data

75:0°E Mean Time

**Latitude : 10° 2' N**

**Longitude : 77.5°E**

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A	A							1
A	A	A	A	A	A							2
A	A	A	A	A	A							3
A	A	A	A	A	A							4
A	A	A	A	A	A							5
A	A	A	A	A	A							6
A	A	A	A	A	A							7
A	A	A	A	A	A							8
A	A	A	A	A	A							9
A	A	A	3.3	A	A							10
A	A	3.7	3.5	A	A							11
A	3.7	3.6	C	A	A							12
3.8	3.8	3.8	A	A	A	A						13
A	4.0	3.8	A	A	A		A					14
A	A	A	A	A	A							15
A	A	3.8	A	3.2	A							16
C	C	C	C	C	A							17
A	A	A	3.5	3.1	2.6							18
A	A	A	A	A	A							19
A	A	A	A	A	A							20
A	A	A	A	A	A							21
A	C	A	A	A	A							22
A	C	A	A	A	A		C					23
A	A	A	A	A	A							24
A	A	A	A	A	A							25
A	A	A	A	A	A							26
A	A	A	C	A	A							27
A	A	U4.2R	3.8	F	A							28
A	A	3.9	3.7H	3.3	A							29
A	A	A	C	C	C							30
A	A	A	A	A	A							31
1	3	7	5	3	1	..						Count
..	..	3.8	3.5	..	..	..						Median
..	..	3.8	3.6	..	..	..						Mean

**Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.**

Characteristic : foE  
Unit : Mc  
Month : January 1960

TABLE 3 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							C	A	A	A	A	A
2							2.2	A	A	A	A	A
3							2.2	3.0	A	A	A	A
4								A	A	A	A	A
5								2.9	3.5	A	A	A
6								3.0	A	A	A	A
7							1.8	A	A	A	A	A
8								3.0H	3.3	A	A	A
9							2.1H	2.9H	3.4	3.8	A	A
10								2.9	3.4	A	A	A
11								A	A	A	A	A
12							1.9	A	A	A	A	A
13								A	A	A	A	A
14								A	A	A	C	A
15								A	A	A	A	A
16								A	A	A	A	A
17							1.9	A	C	C	C	C
18							1.9	A	A	A	A	A
19								C	3.4	A	A	A
20								A	A	A	A	A
21								2.8	A	C	C	A
22								2.7	A	A	A	A
23							1.9	2.8	A	A	A	A
24								U3.2R	A	A	A	A
25								3.1	A	A	A	A
26								U3.2A	A	A	A	A
27								A	A	A	A	A
28								A	A	A	A	A
29								A	A	A	A	A
30							R	A	A	A	A	A
31								A	A	A	A	A
Count							8	12	5	1	..	..
Median							1.9	3.0	3.4	..	..	..
Mean							2.0	3.0	3.4	..	..	..

.Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE  
Unit : Mc  
Month : January 1960

TABLE 3 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	A	A	2.8								1
A	A	A	3.4	A								2
A	A	A	A	A								3
A	A	A	A	A								4
A	A	A	A	A	2.1							5
												6
A	A	A	A	A								7
A	A	A	A	A								8
A	A	A	A	A								9
A	4.2	3.6	A	A								10
												11
3.7	A	3.6	3.3	A	R							12
3.8	A	C	3.3	A								13
3.9	3.8	3.7	A	A								14
A	A	A	A	A	A							15
C	A	A	A	A								16
A	A	3.7	U3.3A	U2.8A								17
C	C	C	C	C	R							18
A	A	U3.3R	3.4	2.8								19
A	A	A	A	A								20
												21
A	A	A	A	A								22
C	A	A	A	C								23
A	A	C	C	C								24
A	A	A	A	A	F							25
												26
A	A	C	A	A								27
A	A	A	A	A								28
A	U4.2R	4.0	3.5	A								29
A	A	A	3.7	F	R							30
A	A	3.8	C	C								31
A	A	A	U3.6A	U3.0A								
3	3	7	8	4	1							Count
..	..	3.7	3.4	..	..							Median
..	..	3.7	3.4	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : January 1960

TABLE 4  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	C						C	C	11.0	11.8	12.6	12.6
2	4.4							7.8	10.8	12.2	12.4	12.4
3								G	G	12.0	12.4	12.6
4								7.4	8.6	11.4	11.8	11.4
5	3.0							8.0	10.0	11.0	12.0	12.4
6				4.0				5.4	9.8	10.4	12.6	12.8
7	8.0	4.0						G	8.8	10.8	12.2	12.8
8	u7.0s							G	8.0	4.5	9.8	12.0
9								G	8.0	G	11.8	13.2
10								3.2	G	7.0	11.8	10.6
11								8.5	9.0	10.6	11.0	9.2
12								6.6	10.6	10.8	12.2	11.8
13								9.2	10.7	11.2	12.5	11.8
14								G	10.6	10.2	11.7	11.2
15								6.6	10.4	C	C	12.6
16	4.0	4.0						7.0	10.4	12.0	12.4	12.8
17	2.2							4.0	9.6	C	C	C
18								u5.0s	10.8	11.0	12.4	13.2
19								G	7.0	12.0	13.2	13.0
20								G	11.0	12.0	12.0	12.0
21								G	G	G	C	12.1
22	u4.2s							G	u5.0s	8.8	11.8	10.8
23								G	u6.9s	10.6	12.0	C
24								G	5.7	5.0	G	11.6
25		5.8						G	9.8	10.7	12.6	12.2
26								u6.4s	9.6	11.8	12.0	12.4
27								S	10.6	11.4	13.0	14.0
28								S	u12.0s	12.0	13.4	13.0
29								S	u11.0s	12.0	12.6	12.0
30								S	12.0	12.0	12.6	13.4
31								S	11.0	12.0	12.2	12.2
Count	7	3		1			..	25	31	29	28	29
Median	4.2	..		..			..	3.2	9.8	11.0	12.2	12.4
Mean	4.7	..		..			..	6.5	9.6	10.6	12.2	12.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : January 1960

TABLE 4 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
12.4	12.0	11.4	9.8	7.0	8.0					5.0	8.6	1
12.2	11.4	10.0	10.0	8.6	7.0s							2
12.8	11.6	12.2	11.4	11.0	7.6							3
12.0	12.4	12.4	11.0	9.0	6.8					3.4		4
12.0	12.6	12.0	10.8	9.4	7.0			4.0				5
12.0	12.6	11.8	10.0	10.6	8.0							6
12.6	12.0	12.0	11.4	11.2	..						7.0s	7
11.0	12.0	12.0	10.8	11.6	8.2					3.8	3.8	8
12.6	13.0	12.6	12.2	10.2	7.8							9
14.0	11.6	14.0	4.3	8.7	7.8							10
9.4	9.8	G	G	8.8	6.8							11
11.2	5.8	7.4	C	8.8	7.5				3.4			12
7.8	G	5.8	10.8	9.0	6.6							13
10.3	G	11.2	10.8	9.0	7.6	3.8						14
12.4	11.6	10.8	9.8	9.2	6.8		3.4		2.3			15
13.0	12.6	6.0	7.0	G	6.8							16
C	C	C	C	C	7.0	1.5		2.4	3.8	7.0		17
13.4	12.4	12.0	G	G	G							18
13.6	12.4	12.3	11.0	9.6	7.0							19
12.0	13.0	12.8	12.0	10.0	8.0					3.6		20
11.8	11.1	12.0	12.2	10.7	7.0s					4.8s	7.0s	21
12.1	C	12.6	11.1	7.0s	7.0s							22
13.2	C	12.6c	12.0	10.4	7.0s	C				C		23
10.7	12.6	12.8	11.6	8.6	8.0							24
11.6	11.6	11.8	10.8	7.0s	7.4s							25
12.0	12.6	12.6	C	10.6	7.8					5.3		26
13.4	13.4	13.0	12.0	10.0	7.0							27
13.2	11.0	G	G	8.0	7.0							28
13.0	11.6	G	G	G	7.0							29
13.0	12.6	9.8	C	C	C					2.4		30
12.0	11.0	10.8	9.2	9.2	8.0							31
30	28	30	27	29	29	2	1	2	3	8	4	Count
12.2	12.0	12.0	10.8	9.2	7.5	..	..	..	..	4.3	..	Median
12.1	11.8	11.4	10.5	9.6	7.4	..	..	..	..	4.4	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs  
Unit : Mc  
Month : January 1960

TABLE 4 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							C	8.0	11.0	12.4	12.8	12.4
2	5.2							9.4	11.4	12.6	12.8	12.8
3		2.8					G	G	9.6	12.6	13.0	12.8
4							G	9.0	10.0	11.6	12.4	11.8
5								G	G	12.0	11.4	12.4
6			2.2	3.5				G	8.8	12.0	12.4	12.4
7	3.6						G	u7.0s	10.4	12.0	12.8	13.0
8	4.0							6.4	8.6	9.8	11.0	13.0
9							G	G	8.8	8.8	14.0	12.8
10							3.6	G	G	9.6	12.0	11.0
11								9.2	9.2	11.4	11.0	8.1
12							G	9.0	10.6	12.8	12.2	12.8
13					3.6			9.2	10.5	12.3	11.8	8.0
14								6.8	10.7	11.6	10.6	10.8
15								6.6	10.6	10.6	C	12.6
16	1.8							9.4	10.6	12.0	13.0	12.2
17							G	9.0	C	C	C	C
18							G	u8.0s	11.0	13.0	12.4	13.0
19								C	10.0	13.0	13.4	13.0
20								9.0	10.0	12.6	12.0	12.0
21								G	3.2	C	C	11.8
22	3.0							G	5.8	10.3	11.0	12.0
23							G	G	8.4	12.0	13.0	12.0
24								G	5.6	8.3	11.8	11.2
25	4.8							G	u9.8s	12.6	12.8	11.6
26								u6.8s	9.8	12.6	12.0	12.8
27								11.0	12.0	12.4	13.0	13.0
28								u10.0s	11.4	12.6	13.0	14.0
29								10.0	11.6	13.0	12.6	12.0
30							G	9.0	12.0	12.0	13.0	13.0
31								10.0	12.0	12.0	12.6	13.2
Count	6	1	1	1	1	..	10	30	30	29	28	30
Median	3.8	..	..	..	..	..	G	7.5	10.0	12.0	12.5	12.4
Mean	3.7	..	..	..	..	..	..	8.1	9.8	11.7	12.4	12.1

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : January 1960

TABLE 4 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
12.0	11.8	10.0	8.8	G					3.8	6.0	6.0	1
11.8	11.0	9.8	8.2	10.0								2
12.4	12.0	11.0	11.4	9.0								3
12.4	12.4	10.8	10.6	8.0							3.6	4
12.4	12.0	10.4	9.8	9.0	G	4.4		4.0				5
12.2	12.6	10.2	10.0	8.4								6
11.8	12.8	11.8	11.4	8.6								7
12.0	12.8	11.4	10.8	10.2					2.2	4.0	4.0	8
13.0	12.2	11.4	11.4	8.4								9
12.4	G	8.8	10.8	8.4								10
7.8	10.8	7.8	G	7.0	G							11
6.6	5.8	C	7.8	7.8				3.8	3.7			12
G	7.8	6.8	9.6	7.8				1.8				13
9.2	11.6	11.0	9.6	8.6	5.6			5.6				14
C	12.0	10.6	10.4	7.8	3.4			1.9				15
13.2	11.0	7.0	6.2	3.2								16
C	C	C	C	C	G				1.8			17
13.0	11.6	G	G	G					u5.0s	u6.0s		18
14.0	13.0	10.8	9.0	8.6								19
13.0	12.4	11.0	11.6	9.2								20
12.2	11.8	u12.0s	u11.0s	u9.6s	u4.0s				u5.0s	u4.0s	u8.8s	21
C	13.4	11.2	3.4	C	2.0							22
14.6	13.6	C	C	C		C	C		C			23
12.6	12.8	12.6	9.4	7.7	5.2							24
11.6	12.0	10.8	10.8	8.6	3.8							25
12.6	12.8	C	12.0	9.8	5.8				4.2	4.0		26
13.0	12.0	12.0	10.0	8.4	3.0					1.8		27
11.0	G	G	7.0	8.2								28
12.6	10.0	13.0	7.0	8.0	S			4.0				29
12.2	11.0	G	C	C	2.2							30
12.0	11.0	10.8	9.8	9.0	4.0							31
28	30	27	28	27	13	1	..	6	7	6	4	Count
12.3	12.0	10.8	9.8	8.4	3.4	..	..	3.9	3.8	4.0	..	Median
12.0	11.6	10.5	9.5	8.4	3.9	..	..	3.5	3.7	4.3	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : fbEs  
Unit : Mc  
Month : January 1960

TABLE 5  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	C						C	C	3.1	3.8	4.0	4.0
2	1.7							2.6	3.2	3.6	4.0	3.9
3								G	G	3.7	4.0	4.1
4								2.5	3.2	3.5	3.9	4.0
5								2.5	3.1	3.6	4.1	3.9
6				1.3				2.6	3.2	3.6	3.8	4.0
7	2.2							G	3.2	3.6	3.9	4.2
8	2.2							G		4.0	4.0	4.0
9								G		G	4.0	4.2
10								2.5	G	3.7	3.9	4.2
11								2.5	3.0	3.5	3.7	3.9
12								2.6	3.2	3.5	3.8	4.0
13								2.5	3.2	3.6	3.8	4.2
14								G	3.2	3.6	3.8	4.2
15								2.4	3.1	C	C	4.0
16	1.5							2.5	3.2	3.6	4.0	4.0
17								2.5	3.1	C	C	C
18								2.6	3.2	3.6	4.0	4.2
19								G		3.4	3.8	4.0
20								G	3.2	3.6	4.0	4.0
21								G	G	G	C	4.0
22	2.3							G	3.0	3.4	4.0	4.0
23								G	3.0	3.5	3.8	4.0
24								G	3.2	3.7	G	4.2
25		1.8						G	3.2	3.7	4.2	4.2
26								2.6	3.3	3.8	4.0	4.2
27									3.2	3.8	4.0	4.2
28								2.6	3.4	3.8	4.1	4.2
29								2.6	3.3	3.9	4.2	4.2
30								2.6	3.2	3.7	4.0	4.2
31									3.2	3.7	4.0	4.2
Count	5	1		1			..	28	28	29	28	30
Median	2.2	..		..			..	2.5	3.2	3.6	4.0	4.0
Mean	2.0	..		..			..	2.5	3.2	3.6	4.0	4.1

Sweep 1.0 Mc. to 23.0 Mc. in 27 seconds.

Characteristic : fb Es  
Unit : Mc  
Month : January 1960

TABLE 5  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
4.2	4.1	3.9	3.5	3.0	2.4					2.0	2.0	1
4.0	4.2	3.9	3.5	3.2	2.4							2
4.2	4.1	3.9	3.6	3.1	2.5							3
4.2	4.0	3.9	3.5	3.1	2.4							4
4.1	4.1	3.8	3.6	3.0	2.6							5
4.1	4.0	4.0	3.5	3.0	2.5							6
4.2	4.1	3.9	3.6	3.1	2.4							7
4.1	4.2	3.9	3.6	3.1	2.5					1.3		8
4.0	4.0	4.0	3.5	3.1	2.4							9
4.2	4.0	3.8	3.7	3.2	2.5							10
4.2	4.1	G	G	3.2	2.6							11
4.1		3.9	C	3.1	2.4				1.4			12
4.2	G		3.8	3.1	2.5							13
4.2	G	4.4	4.8	3.4	2.5	1.4						14
4.2	4.0	3.9	3.6	3.4	2.6							15
4.2	4.2	4.0	3.6	G	2.6							16
C	C	C	C	C	2.5	1.4		1.5	1.5			17
4.2	4.0	4.0	G	G	G							18
4.2	4.0	3.8	3.8	3.2	2.5							19
4.2	4.0	4.0	3.6	3.2	2.5							20
4.2	4.0	4.0	3.6	3.2	2.6					1.6	2.2	21
4.2	C	3.8	3.6	3.1	2.5							22
4.2	C	4.0	3.8	3.3	2.6	C				C		23
4.2	4.2	4.0	3.8	3.4	2.7							24
4.2	4.4	4.2	4.0	3.4	2.7							25
4.2	4.2	4.1	C	3.3	2.7							26
4.2	4.2	4.2	3.8	3.4	2.8							27
4.3	4.2	G	G	3.3	2.8							28
4.2	4.3	G	G	G	2.7							29
4.2	4.2	4.0	C	C	C					2.4		30
4.2	4.0	4.1	3.7	3.3	2.6							31
30	27	29	27	29	29	2	..	1	2	4	2	Count
4.2	4.1	3.9	3.6	3.2	2.5	..	..	..	..	..	..	Median
4.2	4.1	4.0	3.7	3.2	2.6	..	..	..	..	..	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc

Month : January 1960

TABLE 5 (Contd.)

Ionospheric Data

75.0° Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							C	3.0	3.4	3.9	4.0	4.1
2	2.0						G	2.8	3.4	3.8	4.0	4.1
3							G	G	3.4	4.0	4.1	4.2
4							G	3.0	3.4	3.7	4.0	4.2
5								G	G	3.7	3.9	4.0
6				1.4				G	3.4	3.6	3.8	4.0
7	1.6						G	2.9	3.4	4.0	4.0	4.0
8							G	G	3.4	3.8	4.0	4.1
9							2.4	G	G	4.0	4.1	4.2
10												
11							G	2.8	3.4	3.6	4.0	4.1
12								2.9	3.4	3.6	4.0	4.0
13					1.6			2.9	3.4	3.7	4.0	4.0
14								2.9	3.4	3.7	3.9	4.2
15								2.8	3.3	4.0	C	4.2
16	1.8							2.9	3.4	3.6	3.9	4.2
17							G	2.8	C	C	C	C
18							G	2.8	3.4	3.6	4.0	4.2
19								C	3.4	3.6	3.9	4.0
20								2.9	3.2	3.6	4.0	4.0
21								G	3.2	C	C	4.1
22								G	3.2	3.6	4.0	4.2
23							G	G	3.2	3.6	4.0	4.1
24								G	3.4	3.8	4.0	4.2
25	1.9							G	3.4	4.0	4.2	4.2
26									3.0	3.5	3.9	4.2
27									3.0	3.6	4.0	4.2
28									3.0	3.6	4.0	4.2
29									3.0	3.6	4.0	4.2
30							G	3.0	3.5	3.8	4.1	4.2
31									3.0	3.4	3.8	4.1
Count	4	..	..	1	1	..	10	29	29	29	28	30
Median	..	..	..	..	..	..	G	2.8	3.4	3.8	4.0	4.2
Mean	..	..	..	..	..	..	..	2.9	3.4	3.8	4.0	4.1

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fb Es

Unit : Mc

Month : January 1960

TABLE 5 (Contd.)

Ionospheric Data

75.0 E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
4.2	4.0	3.8	3.3	G					1.5	1.6	1.9	1
4.2	4.0	3.6	3.3	2.8								2
4.2	4.0	3.9	3.3	2.9								3
4.2	4.0	3.8	3.3	3.0							1.7	4
4.2	4.0	3.6	3.3	2.9	G							5
4.2	4.1	3.8	3.3	2.8								6
4.1	4.1	3.7	3.4	3.0							2.0	7
4.1	4.2	3.8	3.4	2.9					1.3			8
4.2	4.0	3.6	3.4	2.8								9
4.2	G	4.3	3.4	3.0								10
4.2	4.0		G	3.0	G							11
4.2	3.9	C	3.3	2.9				1.6	1.8			12
G	4.0	3.7	3.4	2.9				1.8				13
4.2	4.1	4.1	3.6	2.8	2.0							14
C	4.0	3.6	3.4	3.0								15
4.2	4.2	4.0	3.4	3.0					1.4	2.0		16
C	C	C	C	C	G							17
4.2	4.0	G	G	G								18
4.4	4.0	3.7	4.2	2.9								19
4.2	4.2	3.8	3.4	3.0								20
4.1	4.1	3.8	3.4	3.0	2.0							21
C	4.4	3.8	3.4	C	2.0							22
4.2	4.2	C	C	C		C	C			C		23
4.2	4.2	4.0	3.5	3.0								24
4.2	4.2	4.0	3.6	3.0								25
4.2	4.2	C	3.5	3.0	2.2							26
4.2	4.2	4.0	3.6	3.1								27
4.3	G	G	..	3.4								28
4.2	4.2	7.0	3.7	3.0	2.3			1.6				29
4.2	4.2	G	C	C								30
4.2	4.0	3.8	3.6	3.1								31
28	30	26	27	27	8	..	..	3	4	3	4	Count
4.2	4.0	3.8	3.4	3.0	2.0	..	..	..	..	..	..	Median
4.2	4.1	4.0	3.5	3.8	2.1	..	..	..	..	..	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin  
Unit : Mc  
Month : January 1960

TABLE 6  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	C	1.3	1.3	1.2	1.4	1.2	C	C	2.0	2.3	2.4	2.9
2	1.4	1.6	1.5	1.4	1.6	1.6	1.5	1.7	2.0	2.3	2.5	2.5
3	1.3	1.4	1.2	1.4	1.4	1.6	1.7	1.8	2.0	2.4	2.6	2.6
4	1.4	1.5	1.6	1.5	1.6	1.4	1.5	1.5	1.9	2.1	2.5	2.6
5	1.0	1.6	1.7	1.3	1.4	1.5	1.6	1.8	C	2.2	2.5	2.5
6	1.4	1.3	1.2	E	1.2	1.1	1.4	1.8	1.8	2.2	2.4	2.5
7	1.3	1.1	1.4	1.3	1.2	1.2	1.3	1.6	1.7	2.3	2.4	2.6
8	2.0	1.7	1.5	1.4	1.2	1.4	1.6	1.7	2.1	2.4	2.4	2.7
9	1.3	1.5	1.0	1.0	1.3	1.2	1.6	1.6	2.1	2.8	2.4	2.6
10	1.2	1.2	1.2	1.1	1.2	1.2	1.5	1.7	1.8	2.3	2.6	2.6
11	1.3	1.4	1.1	E	1.3	1.3	1.4	1.7	2.0	2.2	2.3	2.5
12	1.6	1.4	1.1	1.3	1.2	1.4	1.5	1.7	1.7	2.2	2.3	2.3
13	1.6	1.2	1.3	1.3	1.2	1.3	1.7	2.0	2.0	2.3	2.3	2.5
14	1.2	1.2	1.1	1.2	1.6	1.4	1.5	1.8	2.0	2.3	2.5	3.0
15	1.1	1.1	1.1	1.3	1.3	E	1.2	1.8	2.2	C	C	2.6
16	1.3	1.8	2.0	2.2	1.6	E	1.5	1.8	1.9	2.3	2.4	2.6
17	1.4	1.2	1.4	1.5	1.2	1.4	1.6	1.4	1.6	C	C	C
18	1.3	E	E	E	1.3	1.4	1.3	1.5	1.8	2.1	2.2	2.4
19	1.1	1.2	1.1	1.2	1.2	1.2	1.4	1.8	2.0	2.2	2.4	2.6
20	1.2	1.4	1.1	1.1	1.3	1.3	1.4	1.8	1.8	2.0	2.2	2.2
21	1.4	1.2	1.1	1.3	1.1	1.2	1.3	1.9	2.1	2.4	C	2.3
22	1.4	1.5	1.2	1.3	1.1	1.3	1.4	1.8	1.8	2.2	2.4	2.6
23	1.4	1.0	1.4	1.1	1.1	1.6	1.4	1.9	2.0	2.2	2.4	2.6
24	1.3	1.3	1.1	1.2	1.4	1.3	1.5	1.7	2.2	2.4	2.8	2.7
25	1.4	1.3	1.6	1.1	1.4	1.2	1.5	1.7	2.0	2.3	2.4	2.6
26	1.3	1.2	1.2	1.7	1.6	1.7	1.5	1.5	1.9	2.2	2.6	2.9
27	1.3	1.1	1.2	1.1	E	1.3	1.5	1.6	1.8	2.2	2.4	2.6
28	1.4	1.2	1.2	1.2	1.4	1.4	1.5	1.4	1.7	2.2	2.4	2.6
29	1.3	1.1	1.4	1.6	1.6	1.3	1.7	1.6	1.6	2.2	2.5	2.7
30	E	1.1	1.4	1.4	1.5	1.3	1.4	1.3	1.7	2.1	2.2	2.5
31	1.2	1.3	1.3	1.5	1.2	1.3	1.4	1.7	1.9	2.2	2.4	2.6
Count	30	31	31	31	31	31	30	30	30	29	28	30
Median	1.3	1.3	1.2	1.3	1.3	1.3	1.5	1.7	1.9	2.2	2.4	2.6
Mean	1.3	1.3	1.3	1.3	1.3	1.3	1.5	1.7	1.9	2.3	2.4	2.6

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : January 1960

TABLE 6.

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
3.0	2.9	2.4	2.1	2.0	1.8	1.6	1.3	1.5	1.4	1.2	1.2	1
2.5	2.9	2.4	2.2	2.0	1.6	1.4	1.3	1.4	1.4	1.5	1.5	2
3.0	3.0	2.7	2.6	2.0	2.0	1.4	1.3	1.4	1.3	1.2	1.4	3
2.7	2.6	2.6	2.5	2.2	2.0	C	C	C	1.5	1.4	1.6	4
2.7	2.5	2.4	2.2	1.8	1.7	1.4	1.6	C	2.0	1.9	1.6	5
2.7	2.4	2.3	2.2	1.8	1.6	1.4	1.1	1.2	1.1	1.1	1.0	6
2.8	2.6	2.6	2.5	2.3	2.5	1.4	1.4	1.4	1.3	1.5	1.8	7
3.0	2.7	2.5	2.3	1.8	1.7	1.4	1.2	1.3	1.2	E	1.3	8
2.6	2.7	2.3	2.2	1.8	2.0	1.3	1.2	1.3	1.4	1.3	1.3	9
2.6	2.6	2.3	2.3	2.0	1.8	1.5	1.2	1.2	1.5	1.6	1.4	10
2.5	2.6	2.4	3.0	2.1	1.8	1.4	1.3	1.5	1.8	1.6	1.7	11
2.5	2.6	2.5	C	1.9	1.9	1.5	1.0	1.3	1.2	1.4	1.6	12
2.5	2.5	2.5	2.2	2.0	1.9	1.4	1.6	1.5	1.4	1.3	1.4	13
3.0	3.2	2.5	2.5	1.9	1.6	1.3	1.5	1.3	1.4	1.3	1.1	14
2.5	2.6	2.4	2.2	1.6	1.7	1.5	1.3	1.4	1.5	1.6	1.3	15
2.6	3.0	2.7	2.4	2.0	1.6	1.6	1.3	1.6	1.5	1.4	1.4	16
C	C	C	C	C	1.9	1.2	1.3	1.3	1.2	1.4	1.5	17
2.6	2.5	2.5	2.4	2.0	1.9	1.5	1.4	1.6	1.5	1.5	1.3	18
2.8	2.6	2.4	2.4	2.0	2.0	1.6	1.5	1.5	1.5	1.5	1.7	19
2.6	2.4	2.4	2.4	2.0	2.0	1.5	1.1	1.9	1.6	1.7	1.3	20
C	2.5	2.4	2.3	2.2	2.0	1.5	1.3	1.3	1.2	1.3	1.7	21
2.5	C	2.2	2.2	1.7	1.6	1.4	1.3	1.5	1.6	1.9	1.7	22
3.2	C	2.8	2.5	2.2	1.9	C	C	1.3	1.2	C	1.5	23
3.0	2.8	2.7	2.3	1.9	1.8	1.6	1.3	1.3	1.5	1.4	1.8	24
2.6	2.7	2.6	2.6	2.3	1.8	1.6	1.4	1.7	1.3	1.8	1.5	25
2.8	2.8	2.5	C	2.0	1.8	1.5	1.4	1.2	1.3	1.5	1.2	26
2.8	2.8	2.6	2.4	2.0	1.9	1.7	1.3	S	S	1.4	1.4	27
3.2	2.8	2.8	2.5	2.1	1.9	1.6	1.3	1.4	1.2	1.6	1.2	28
2.6	2.8	2.4	2.6	2.2	2.0	1.6	2.2	1.3	1.3	1.2	E	29
2.6	2.6	2.2	C	C	C	1.6	1.4	1.3	1.4	1.1	1.4	30
2.8	3.0	2.5	2.4	2.0	1.7	1.6	1.1	1.3	1.4	1.4	1.2	31
29	28	30	27	29	30	29	29	28	30	30	31	Count
2.7	2.6	2.5	2.4	2.0	1.8	1.5	1.3	1.4	1.4	1.4	1.4	Median
2.7	2.7	2.5	2.4	2.0	1.8	1.5	1.3	1.4	1.4	1.4	1.4	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin  
Unit : Mc  
Month : January 1960

TABLE 6 (Contd.)  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	1.4	1.2	1.2	1.2	1.3	1.3	C	2.2	2.2	2.4	2.7	2.6
2	1.4	1.6	1.4	1.2	1.4	1.6	2.1	1.8	2.2	2.4	2.5	2.6
3	1.2	1.3	1.2	1.4	1.3	1.8	1.8	1.9	2.1	2.4	2.7	2.8
4	1.3	1.6	1.3	1.5	1.4	1.5	1.8	1.6	2.1	2.3	2.6	2.7
5	1.7	1.5	1.3	1.4	1.5	1.5	2.0	1.8	2.0	2.4	2.6	2.6
6	1.6	1.2	1.1	1.2	1.2	1.0	2.1	1.8	2.1	2.2	2.5	2.6
7	1.2	1.5	1.4	1.4	1.2	1.3	1.5	1.5	2.0	2.9	2.6	2.6
8	1.8	1.6	1.3	1.3	1.4	1.5	2.1	2.0	2.4	2.4	2.7	2.8
9	1.4	1.2	1.1	1.2	1.0	1.3	1.7	1.7	2.2	2.4	2.5	2.7
10	1.3	1.3	1.2	1.3	1.3	1.3	1.8	1.7	2.3	2.2	2.6	2.6
11	1.1	1.2	1.1	1.1	1.4	1.4	2.1	2.0	2.3	2.2	2.3	2.5
12	1.6	1.3	1.3	1.2	1.2	1.4	1.6	1.6	2.0	2.3	2.3	2.5
13	1.3	1.2	1.3	1.1	1.2	1.8	2.4	2.0	2.1	2.2	2.5	2.6
14	1.1	1.0	1.2	1.5	1.2	1.4	2.2	2.0	2.2	2.4	2.7	3.0
15	1.3	1.1	1.3	1.4	E	E	2.0	1.9	2.3	2.6	C	2.5
16	1.2	2.0	1.9	1.8	1.5	E	2.2	1.8	1.9	2.2	2.4	2.6
17	1.5	1.4	1.5	1.3	1.3	1.3	1.7	1.5	C	C	C	C
18	1.2	E	1.1	1.1	1.1	1.2	1.6	1.6	2.0	2.1	2.5	2.4
19	1.1	1.1	1.1	1.2	1.4	1.4	2.0	C	2.2	2.2	2.4	2.6
20	1.1	1.1	E	1.4	1.5	1.5	2.2	1.7	1.9	2.2	2.3	2.5
21	1.4	1.2	1.2	1.3	1.2	1.3	1.1	2.0	1.8	C	C	2.6
22	1.8	1.4	1.2	1.6	1.5	1.4	2.0	1.7	2.0	2.2	2.4	2.7
23	1.3	1.2	1.2	1.3	1.2	1.3	1.7	1.8	2.1	2.0	2.3	2.6
24	1.2	1.5	1.1	1.4	1.3	1.2	2.1	2.2	2.0	2.2	2.5	2.6
25	1.3	1.5	1.1	1.1	1.2	1.4	2.0	1.7	2.1	2.3	2.4	2.9
26	1.1	1.1	1.3	1.3	1.8	1.6	2.1	1.8	2.1	2.2	2.6	2.8
27	1.1	1.1	1.3	1.2	1.2	1.4	2.0	1.7	2.2	2.2	2.6	2.8
28	1.1	1.2	1.1	1.2	1.3	1.5	2.1	1.6	2.0	2.4	2.5	2.8
29	1.3	E	1.5	1.5	1.4	1.4	2.1	1.5	1.9	2.4	2.6	2.8
30	1.2	1.3	1.4	1.3	1.4	1.4	1.6	1.6	1.8	2.2	2.4	2.6
31	1.2	1.2	1.4	1.2	1.2	1.3	2.0	1.7	2.2	2.4	2.5	2.7
Count	31	31	31	31	31	31	30	30	30	29	28	30
Median	1.3	1.2	1.2	1.3	1.3	1.4	2.0	1.8	2.1	2.3	2.5	2.6
Mean	1.3	1.3	1.3	1.3	1.3	1.4	1.9	1.8	2.1	2.3	2.5	2.7

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin  
Unit : Mc  
Month : January 1960

TABLE 6 (Contd.)  
Ionospheric Data  
75-0°E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.9	2.7	2.3	2.2	1.8	2.0	1.4	1.5	1.4	1.2	1.1	1.3	1
2.8	2.7	2.2	2.1	1.7	2.0	1.2	1.3	1.3	1.5	1.7	1.4	2
2.9	3.0	2.6	2.2	2.0	2.0	1.2	1.4	1.4	1.1	E	1.3	3
2.8	2.6	2.6	2.4	2.2	2.0	1.3	C	1.1	1.5	1.6	1.5	4
2.6	2.5	2.3	2.2	1.8	1.7	1.6	1.8	C	1.9	2.1	1.2	5
2.5	2.4	2.4	2.2	1.8	1.9	1.2	1.2	1.2	1.3	1.1	1.3	6
2.7	2.8	2.5	2.4	2.3	2.1	1.3	1.3	1.3	1.5	1.8	2.0	7
2.7	2.6	2.5	2.0	1.6	2.0	1.2	1.3	1.3	1.1	1.2	1.5	8
2.5	2.4	2.3	2.1	1.9	2.0	1.3	1.3	1.3	1.6	1.3	1.3	9
2.6	2.8	2.4	2.2	2.2	2.0	1.2	1.2	1.5	1.7	1.6	1.4	10
2.6	2.4	2.4	2.3	2.2	1.6	1.3	1.3	1.4	1.6	1.7	1.6	11
2.8	2.6	C	2.4	1.1	2.0	1.5	1.3	1.4	1.2	1.6	1.5	12
2.6	2.6	2.6	2.2	2.0	2.1	1.3	1.6	1.5	1.5	1.4	1.3	13
3.2	2.6	2.5	2.2	1.9	1.7	1.4	1.3	1.2	1.6	1.2	1.1	14
C	2.4	2.3	1.9	2.2	1.8	1.5	1.5	1.4	1.5	1.6	1.4	15
3.2	2.9	2.6	2.3	1.8	2.1	1.4	1.4	1.3	1.4	2.0	1.4	16
C	C	C	C	C	1.6	1.3	1.3	1.4	1.2	1.9	1.2	17
2.6	2.4	2.4	2.3	2.2	2.0	1.4	1.5	1.7	1.4	1.2	1.3	18
2.6	2.6	2.3	2.4	2.0	2.1	1.3	1.5	1.4	1.6	1.4	1.4	19
2.4	2.4	2.4	2.2	2.2	2.0	1.4	1.5	2.0	1.4	1.5	1.4	20
2.4	2.6	2.4	2.2	2.2	1.6	1.2	1.3	1.3	1.2	1.7	1.5	21
C	2.4	2.2	2.2	C	1.6	1.1	1.5	1.6	1.6	1.8	1.5	22
3.0	2.8	C	C	C	2.2	C	C	1.2	1.5	C	1.4	23
2.8	3.0	2.7	2.2	2.0	1.8	1.2	1.4	1.3	1.3	1.3	1.8	24
3.0	2.6	2.5	2.4	2.1	1.6	U1.3s	1.5	1.5	1.3	2.0	1.8	25
2.6	2.6	C	2.3	2.0	1.7	U1.3s	1.5	1.2	1.2	1.5	1.3	26
3.0	2.6	2.6	2.2	2.0	1.8	1.2	1.3	S	1.4	1.3	1.7	27
2.9	3.0	2.9	2.3	2.2	1.7	1.1	1.4	1.3	1.4	1.6	1.5	28
2.8	2.6	2.3	2.1	2.2	1.7	1.4	1.3	1.1	1.3	1.2	1.2	29
2.8	2.4	3.2	C	C	1.9	1.3	1.4	1.4	1.3	1.1	1.2	30
3.0	2.6	2.5	2.3	2.2	1.8	1.3	1.3	1.4	1.5	1.3	1.4	31
28	30	27	28	27	31	30	29	29	31	30	31	Count
2.8	2.6	2.4	2.2	2.0	1.9	1.3	1.4	1.4	1.4	1.5	1.4	Median
2.8	2.6	2.5	2.2	2.0	1.9	1.3	1.4	1.4	1.4	1.5	1.4	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : h'F2  
Unit : Km  
Month : January 1960

TABLE 7  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1							C	C	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5												
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10												
11								L	L	L	L	L
12								L	L	L	L	270
13								L	L	L	L	L
14									L	L	L	L
15												
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20												
21									L	L	L	L
22									L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25												
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30												
31								L	L	L	L	L
Count								..	..	..	..	1
Median								..	..	..	..	..
Mean								..	..	..	..	..

Sweep 1.0 Mc. to 25.0. Mc. in 27 seconds.

Characteristic : h'F2  
Unit : Km  
Month : January 1960

TABLE 7 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E  
LAL 2 0000 1 1 0 0 0

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	410	L	L	L	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
L	L	L	L	L	L							5
												6
L	L	L	L	L	L							7
L	L	L	L	L	L							8
L	L	L	L	L	L							9
L	L	L	L	L	L							10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
L	L	L	L	L	L							31
..	2	1	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2  
Unit : Km  
Month : January 1960

TABLE 7 (Contd.)  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							C	L	L	L	L	L
2							L	L	L	L	L	L
3							L	L	L	L	L	L
4												
5												
6							L	L	L	L	L	L
7							L	L	L	L	L	L
8							L	L	L	L	L	L
9							L	L	L	L	L	L
10												
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	C	L
15												
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20												
21								L	L	C	C	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25												
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30												
31								L	L	L	L	L
Count							..	..	..	..	..	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km

Month : January 1960

TABLE 7 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
												5
												6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L								11
L	L	L	L	L								12
L	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	L	L	L								16
L	L	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L								26
L	L	L	L	L								27
L	L	L	L	L								28
L	L	L	L	L								29
L	L	L	L	L								30
L	L	L	L	L								31
												Count
												Median
												Mean

Sweep: 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F  
Unit : Km  
Month : January 1960

TABLE 8  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	C	260	225	220	220	220	C	C	240	215	210	205
2	280	275	255	220	220	225	280	245	235	220	220	200
3	240	245	240	230	215	220	260	240	220	220	200	220
4	215	215	220	200	210	225	280	240	225	220	215	200
5	220	215	215	240	220	215	240	240	220	215	200	200
6	225	250	245	260	230	235	265	250	240	220	210	200H
7	U240F	220	220	220	220	215	230	230	230	205	200	190H
8	245	235	240	230	215	200	235	240	225	210	205	200
9	U245F	U230	U220F	U220F	240	U250F	230	240	240	230	210H	200H
10	220	235	U255F	U260F	U250F	235	255	250	240	225	215	205
11	260	255	225	260	270	280	310	250	230	210	205	205
12	245	250	250	250	230	220	270	260	235	225	210	205
13	240	230	220	220	240	255	265	255	225	210	200	200
14	230	225	215	230	260	270	255	250	230	220	210	210
15	205	210	210	205	240	330	300H	260	235	C	C	205H
16	240	240	220	240	240	E	320	260	235	220	215	200
17	300	260	240	220	220	240	260	250	235	C	C	C
18	240	220	220	220	220	225	260	240	230	220	210	200
19	220	240	230	230	220	220	280	240	230	220	210	200
20	240	240	220	220	223	220	260	240	230	210	200	195
21	220	235	250	235	260	245	255	225	230	215	C	205
22	260	230	240	230	225	215	250	250	225	210	210	200H
23	240	250	270	240	235	230	230	250	230	220	210	205
24	240	220	240	235	230	230	240	250	240	225	205H	215H
25	260	300	280	270	245	240	235	250	235	225	215H	205H
26	260	240	230	220	235	240	270	260	235	225	210	200H
27	300F	260	230	240	235	230	255	260	230	220	220	210
28	290	240	220	210	215	240	300	260	240	230	220	220
29	260F	250	240	240	220	220	260	250	230	220	210	200
30	300	240	220	205	220	220	260	260	240	220	220	200
31	265	245	235	220	210	215	240	250	240	230	210	220
Count	30	31	31	31	31	31	30	30	31	29	28	30
Median	240	240	230	230	225	230	260	250	230	220	210	200
Mean	250	240	235	230	230	235	260	250	230	220	210	205

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F  
Unit : Km  
Month : January 1960

TABLE 8 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
200	205 <sup>H</sup>	205	220	230	260	300	F	F	F	F	250	1
200	205	200	220	240	260	300	375	375	380	F	290	2
200	200	220	225	240	260	305	F	F	300	290	245	3
200	180 <sup>H</sup>	200	220	240	260	300	320	270	235	230	235	4
190	205	200	220	240	260	300	F	290	235	215	215	5
200 <sup>H</sup>	200 <sup>H</sup>	210 <sup>H</sup>	220	230	250	285	355	U340 <sup>F</sup>	U315 <sup>F</sup>	265	225	6
205	210	210	215 <sup>H</sup>	230	260	300	405 <sup>F</sup>	U380 <sup>F</sup>	U300 <sup>F</sup>	270	250	7
200 <sup>H</sup>	200 <sup>H</sup>	205	210	220	260 <sup>F</sup>	300	U400 <sup>F</sup>	F	U400 <sup>F</sup>	U350 <sup>F</sup>	U300 <sup>F</sup>	8
200 <sup>H</sup>	205	220	225	240	260	300	U380 <sup>F</sup>	U310 <sup>F</sup>	F	U305 <sup>F</sup>	U265 <sup>F</sup>	9
200 <sup>H</sup>	205 <sup>H</sup>	210	205 <sup>H</sup>	240	265 <sup>H</sup>	305	365	340 <sup>F</sup>	255	255	280	10
220	225	220	225	240	265	295	370	325	270	260	245	11
200 <sup>H</sup>	210	210	C	235	255	285	335	360	320	305	280	12
205	210	215	220	225	255	280	F	U315 <sup>F</sup>	265	230	230	13
215	200 <sup>H</sup>	U230 <sup>A</sup>	A	220	245 <sup>H</sup>	285	285	250	240	220	225	14
210	220	220	215	240	260	300	385	F	F	U270 <sup>F</sup>	270	15
200	200	225	230	240	260	300	380	U400 <sup>F</sup>	U300 <sup>F</sup>	280	305	16
C	C	C	C	C	260	300	320	300	300	275	260	17
200	200	220	220	240	245	280	340	300	260	220	210	18
200	200	220	220	235	260	290	380	U380 <sup>F</sup>	U280 <sup>F</sup>	245	240	19
200	200	210	220	230	260	300	340	300	250	260	240	20
205	200	205	220	240	260	300	280	230	220	255	260	21
195 <sup>H</sup>	C	200 <sup>H</sup>	220	240	265	305	400	320	270	240	240	22
200	C	215	225	240	260	C	395	U355 <sup>F</sup>	280	C	240	23
200 <sup>H</sup>	200 <sup>H</sup>	200 <sup>H</sup>	200 <sup>H</sup>	240	260	300	F	U250 <sup>F</sup>	F	240	245	24
200 <sup>H</sup>	200 <sup>H</sup>	215 <sup>H</sup>	235	245	265	300	400	U395 <sup>F</sup>	U270 <sup>F</sup>	F	U280 <sup>F</sup>	25
200 <sup>H</sup>	210 <sup>H</sup>	205 <sup>H</sup>	C	240	265	315	F	F	F	F	F	26
210	200	200	210	240	260	300	430	490 <sup>F</sup>	440 <sup>F</sup>	420 <sup>F</sup>	290 <sup>F</sup>	27
215	205	215	220	240	260	300	400 <sup>F</sup>	310 <sup>F</sup>	300 <sup>F</sup>	400 <sup>F</sup>	350	28
190	220	220	220	220	250	300	410	390	320	300	320	29
200	200	200	C	C	C	300	390 <sup>F</sup>	400 <sup>F</sup>	420 <sup>F</sup>	340 <sup>F</sup>	300	30
210	205	200	210	225	255	300	420	400 <sup>F</sup>	420	360 <sup>F</sup>	340	31
30	28	30	26	29	30	30	25	26	26	26	30	Count
200	200	210	220	240	260	300	380	330	290	270	255	Median
200	205	210	220	235	260	300	370	340	300	280	265	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F  
Unit : Km  
Month : January 1960

TABLE 8 (Contd.)  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	275	240	220	220	220	240	C	240	220	215	205	205
2	280	260	225	205	210	235	260	240	220	215	205	200
3	255	250	245	220	210	220	245	235	220	200	200	205
4	215	215	200	205	215	240	260	240	220	205	200	205
5	220	215	220	240	215	205	250	235	215	210	200	200
6	240	245	240	250	220	245	255	240	230	220	205	205H
7	235	220	220	220	220	210	250	230	220	220	200H	200
8	240	240	240	220	205	205	245	230	220	205	205	195H
9	U260F	U220F	U220F	U235F	U260F	220F	250	230	230	220	200H	200H
10	225	U240F	U245F	255	240	230	265	240	230	220	205	200H
11	265	225	225	265	280	280	270	240	225	215	215	200H
12	255	245	255	245	225	225	270	245	225	220	215	200
13	235	225	225	225	260	245	275	240	215	200	200	205
14	220	210	220	240	275	250	270	235	225	210	205	210
15	200	230	210	240	285	370	280	245	220	220	C	205H
16	240	235	225	240	280	E	280	240	225	220	200	200
17	280	240	220	220	220	240	260	240	C	C	C	C
18	240	220	220	220	220	240	260	220H	220	220	205	200
19	240	220	240	220	220	240	260	C	220	210	200	200
20	240	235	220	220	220	220	260	240	220	200	195	200
21	220	230	235	240	260	240	235	235	220	C	C	205
22	245	230	235	220	220	220	255	235	225	200H	200H	205H
23	245	265	260	235	235	220	260	240	225	215H	205H	205
24	235	240	250	230	235	220	265	245	230	220	210H	210
25	280	285	270	250	240	225	265	240	220	220	210H	200H
26	240	235	225	230	240	235	275	245	225	215	215	200H
27	280	240	240	240	240	220	270	240	225	220	210	210
28	250	235	220	215	230	250	290	250	240	220	210	210
29	260	260	240	230	230	225	270	245	230	205	200H	200
30	260	230	210	200	220	225	280	245	230	220	200	210
31	260	240	230	215	210	220	270	240	230	220	200	210
Count	31	31	31	31	31	31	30	30	30	29	28	30
Median	240	235	225	230	225	230	260	240	220	215	205	200
Mean	245	235	230	230	235	235	265	240	225	215	205	205

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F  
Unit : Km  
Month : January, 1960

TABLE 8 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
200H	210	220	235	240	280	355	F	F	300	F	260	1
200	200	220	225	245	280	340	380	380	F	290	260	2
200H	210	220	230	240	280	350	F	F	300	260	225	3
200	195H	210	230	240	270	325	300	240	235	235	235	4
195	200	200	225	245	275	320	F	250	220	220	220	5
200H	200H	220	225H	240	270	310	365F	U330F	290F	250	230	6
205	210	210	210H	245	275	350	U400F	U370F	U305F	260	240	7
200H	200	205	220	240	270	360	U450F	U400F	U400F	U320F	U290F	8
210	220	220	230	250	270	360	F	F	F	U250F	U230F	9
205H	220	U230A	230	245	280H	345	365	300	245	280	265	10
220	225	225	215	255	275	335	U360F	260	255	240	245	11
200	205	C	220	250	270	315	355	350	320	280	260	12
205	215	210	225	240	270	310	F	U300F	240	225	235	13
205	210	220	220	220H	260	295	260	240	235	215	225	14
C	220	220	220	260	280	350	380F	365	U305F	275	260	15
200	220	220	235	245	270	340	U400F	U340F	290	300	305	16
C	C	C	C	C	265	315	340	280	280	260	260	17
200	200	220	220	240	260	310	330	280	240	220	210	18
200	200	220	A	240	280	340	U380F	360F	260F	235	240	19
205	215	220	220	240	270	320	320	260	245	240	230	20
200	205	215	230	250	275	305	255	220	240	265	280	21
C	225	200	225	C	285	360	375F	285	255	240	240	22
205	210	C	C	C	280	C	C	320F	260	C	240	23
200H	200H	200H	210H	250	275	F	F	260	U240F	240	250	24
200H	195H	230	230	255	280	355	F	U380F	U270F	U310F	280	25
200H	205	C	225	250	280	375	F	F	F	F	F	26
200	195H	220	230	255	280	360	F	440	440F	320F	320F	27
210	205	210	240	250	270	370	420F	300F	300F	360	310F	28
190H	230	A	225	240	270	360	420	360	300	315	330F	29
210	200	210	C	C	275	360	390F	420F	400F	290F	270	30
210	200	200	220	240	270	355	420	420	380	280	300	31
28	30	26	27	27	31	29	21	27	28	28	30	Count
200	205	220	225	245	275	345	375	320	275	260	255	Median
205	210	215	225	245	275	340	365	325	290	265	260	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : h'E  
Unit : Km  
Month : January, 1960

TABLE 9  
Ionospheric Data  
75 0°E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1							C	C	A	A	A	A
2								110	A	A	A	A
3								115	105	A	A	A
4								A	A	A	A	A
5								105	A	A	A	A
6								110	A	A	A	A
7								105 <sub>H</sub>	A	A	A	A
8								105	100	100	A	A
9								105	110	115	A	A
10								120	110	110	105	105
11								110	A	A	A	A
12								110	A	A	A	A
13								115	A	A	A	A
14								120	A	A	A	A
15								120	A	C	C	A
16								110	A	A	A	A
17								110	A	C	C	C
18								110	A	A	A	A
19								120	110	A	A	A
20								120	A	A	A	A
21								120	115	105	C	A
22								120	A	A	A	A
23								120	110	A	A	A
24								115	A	A	110	A
25								115	110	A	A	A
26								110	105	A	A	A
27								120	A	A	A	A
28								A	A	A	A	A
29								120	A	A	A	A
30								A	A	A	A	A
31								120	A	A	A	A
Count							..	27	9	4	2	1
Median							..	115	110	..	..	..
Mean							..	115	110	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km

Month : January, 1960

TABLE 9 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	105	110							1
A	A	A	A	A	A							2
A	A	A	A	A	A							3
A	A	A	A	A	A							4
A	A	A	A	A	A							5
A	A	A	A	A	A							6
A	A	A	A	A	A							7
A	A	A	A	A	A							8
A	A	A	A	A	A							9
A	A	A	110	A	A							10
A	A	105	120	A	120							11
A	105	105	C	110	120							12
105	105	105	A	A	110							13
A	105	105	105	A	105	A						14
A	A	A	A	A	110							15
A	A	110	A	110	110							16
C	C	C	C	C	120							17
A	A	A	105	105	120							18
A	A	A	A	105	120							19
A	A	A	A	A	120							20
A	A	A	A	A	A							21
A	C	A	A	A	A							22
A	C	A	A	A	A	C						23
A	A	A	A	A	A							24
A	A	A	A	A	115							25
110	115	A	C	115	115							26
A	A	A	A	A	120							27
A	A	100	110	110	120							28
A	A	100	110	110	120							29
A	A	A	C	C	C							30
A	A	A	A	A								31
2	4	7	6	8	16	..						Count
..	..	105	110	110	120	..						Median
..	..	105	110	110	115	..						Mean

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : h'E  
Unit : Km  
Month : January, 1960

TABLE 9 (Contd.)  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							C	105	A	A	A	A
2								A	A	A	A	A
3							120	105	A	A	A	A
4							120H	A	A	A	A	A
5								100	100	A	A	A
6								105	A	A	A	A
7							120	A	A	A	A	A
8								105	100	A	A	A
9							130	100	110	110	A	A
10								115	110	105	A	105
11								105	A	A	A	A
12							135	110	A	A	A	A
13								A	A	A	A	A
14								115	A	A	A	A
15								115	A	A	C	A
16								110	A	A	A	A
17							125	A	C	C	C	C
18							140	A	A	A	A	A
19								C	105	A	A	A
20								A	A	A	A	A
21								120	A	C	C	A
22								110	A	A	A	A
23							140	120	A	A	A	A
24								110	A	A	A	A
25								110	105	A	A	A
26								110	A	A	A	110
27								110	A	A	A	A
28								A	A	A	A	A
29							100	A	A	A	A	A
30								A	A	A	A	A
31								A	A	A	A	A
Count							9	19	6	2	..	2
Median							125	110	105	..	..	..
Mean							125	110	105	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km

Month : January, 1960

TABLE 9 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	A	A	105								1
A	A	A	A	100								2
A	A	A	A	A								3
A	A	A	A	A								4
A	A	A	A	A	140							5
A	A	A	A	A								6
A	A	A	A	A								7
A	A	A	A	A								8
A	A	A	A	A								9
A	110	110	A	A								10
105	105	110	115	115	130							11
105	A	C	110	115								12
105	105	110	A	110								13
A	A	A	A	A	A							14
C	A	A	A	110								15
A	A	110	110	110								16
C	C	C	C	C	125							17
A	A	105	105	120								18
A	A	A	A	110								19
A	A	A	A	120								20
A	A	A	A	A								21
C	A	A	A	A								22
A	A	C	C	C								23
A	A	A	A	A								24
A	A	A	A	115	105							25
110	A	C	A	115								26
A	A	A	A	A								27
A	105	115	110	110								28
A	A	A	110	110	120							29
A	A	120	C	C								30
A	A	A	100	110								31
												Count
4	4	7	8	15	5							Median
..	..	110	110	110	125							Mean
..	..	110	110	110	125							

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es  
Unit : Km  
Month : January, 1960

TABLE 10  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	C						C	C	100	100	100	100
2	105							100	100	100	100	100
3								G	G	100	100	100
4								100	100	100	100	100
5	115							100	100	100	100	100
6				105				140	100	100	100	100
7	100	120						G	100	100	100	100
8	100							G	165	120	100	100
9								G	140	G	100	100
10								150	G	110	100	100
11								100	100	100	100	100
12								105	100	100	100	100
13								100	100	100	100	100
14								G	100	100	100	100
15								105	100	C	C	100
16	105	105						100	100	100	100	100
17	120							100	100	C	C	C
18								100	100	100	100	100
19								G	100	100	100	100
20								G	100	100	100	100
21								G	G	G	C	100
22	110							G	100	100	100	100
23								G	110	100	100	100
24								G	100	100	G	100
25		100						G	100	100	100	100
26								100	100	100	100	100
27								100	100	100	100	100
28								100	100	100	100	100
29								100	100	100	100	100
30												
31								100	100	100	100	100
Count	7	3	..	1	..	..	..	18	28	27	27	30
Median	105	..	..	..	..	..	..	100	100	100	100	100
Mean	110	..	..	..	..	..	..	105	105	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : January, 1960

TABLE 10 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude: 10.2°N

Longitude: 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
100	100	100	100	100	100					105	105	1
100	100	100	100	100	100							2
100	100	100	100	100	100							3
100	100	100	100	100	100					100		4
100	100	100	100	100	100			100				5
100	100	100	100	100	100							6
100	100	100	100	100	100					100	100	7
100	100	100	100	100	100						105	8
100	100	100	100	100	110							9
100	100	100	120	100	105							10
100	100	G	G	100	105				110			11
100	100	100	C	100	100							12
100	G	105	100	100	105							13
100	100	110	100	100	100	135						14
100	100	100	100	100	105		125		115			15
100	100	100	100	G	100							16
C	C	C	C	C	100	140		135	120	120		17
100	100	100	G	G	G							18
100	100	100	100	100	105					100		19
100	100	100	100	100	110							20
100	100	100	100	100	105					100	100	21
100	C	100	100	100	115					C		22
100	C	100	100	100	100	C						23
100	100	100	100	100	100							24
100	100	100	100	100	100							25
100	100	100	C	100	110					115		26
100	100	100	100	100	110							27
100	100	G	G	100	110							28
95	100	G	G	G	100							29
100	100	100	C	C	C					120		30
100	100	100	100	100	100							31
30	27	27	23	26	28	2	1	2	3	8	4	Count
100	100	100	100	100	100	..	..	..	..	100	..	Median
100	100	100	100	100	105	..	..	..	..	110	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es  
Unit : Km  
Month : January, 1960

TABLE 10 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude: 10°2'N  
Longitude: 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							C	100	100	100	100	100
2	100						G	100	100	100	100	100
3		105					G	G	100	100	100	100
4							G	100	100	100	100	100
5								G	G	100	100	100
6			100	100			G	G	100	100	100	100
7	100							100	100	100	100	100
8	100						G	185	105	100	100	100
9							G	G	120	100	100	100
10							135	G	G	100	100	100
11							G	100	100	100	100	100
12								100	100	100	100	100
13					110			100	100	100	100	100
14								100	100	100	100	100
15								105	100	100	C	100
16	100	100	100				G	100	100	100	100	100
17							G	100	C	C	C	C
18								100	100	100	100	100
19								C	100	100	100	100
20								100	100	100	100	100
21								G	100	C	C	100
22	115						G	G	100	100	100	100
23								G	100	100	100	100
24								G	100	100	100	100
25	100							G	100	100	100	100
26								100	100	100	100	100
27								100	100	100	100	100
28								100	100	100	100	100
29							G	100	100	100	100	100
30								100	100	100	100	100
31								100	100	100	100	100
Count	6	2	2	1	1	..	1	20	28	29	28	30
Median	100	..	..	..	..	..	..	100	100	100	100	100
Mean	100	..	..	..	..	..	..	105	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : January 1960

TABLE 10 (Contd.)

Ionospheric Data

75° 0'E Mean Time

Latitude: 10° 2'N

Longitude: 77° 5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
100	100	100	100	G					110	105	105	1
100	100	100	100	100								2
100	100	100	100	100								3
100	100	100	100	100							115	4
100	100	100	100	100	G	120		100				5
100	100	100	100	100								6
100	100	100	100	100							105	7
100	100	100	100	100					100	100		8
100	100	100	100	105								9
100	G	100	100	105								10
100	100	105	G	105	G							11
100	100	C	100	100				110	105			12
G	110	100	100	100				110				13
100	100	100	100	100	120							14
C	100	100	100	105	140			115			105	15
100	100	120	120	120					135			16
C	C	C	C	C	G				120	120		17
100	100	G	G	G								18
100	100	100	100	100								19
100	100	100	100	100								20
100	100	100	100	100	115				105	110	100	21
C	100	100	100	C	125							22
100	100	C	C	C		C	C			C		23
100	100	100	100	100	140							24
100	100	100	100	100	100							25
100	100	C	100	100	110				125	115		26
100	100	100	100	100	140					110		27
100	G	G	130	100								28
100	100	100	100	100	110							29
100	100	G	C	C	150							30
100	100	100	100	100	100							31
27	28	24	26	25	11	1	..	4	7	6	5	Count
100	100	100	100	100	120	..	..	..	110	110	105	Median
100	100	100	100	100	125	..	..	..	115	110	105	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : (M 3000 2F)

Unit : ...

Month : January 1960

TABLE 11  
Ionospheric Data  
75°0'E Mean Time

Latitude: 10°2'N

Longitude: 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	C	F	3.10	3.10	3.25	3.30	C	C	2.70	2.30	2.40	2.35
2	F	F	F	F	3.30	3.30	2.75	2.80	2.60	2.40	2.40	2.30
3	2.70	F	F	3.05	3.20	3.40	2.85	3.10	3.00	2.70	2.10 <sub>H</sub>	2.30
4	3.05	3.05	3.20	3.25	3.30	3.20	2.70	2.90	2.75	2.40	2.30	2.40
5	3.05	3.05	3.15	3.05	3.20	3.30	2.80	3.10	2.80	2.40	2.40	2.35
6	3.05	2.95	2.95	2.90	3.20	3.20	2.90	3.00	2.85	2.55	2.30	2.20
7	3.00	3.05	3.00	3.00	3.15	3.25	3.20	3.05	2.80	2.50	2.25	2.15
8	2.80 <sub>F</sub>	2.70	2.75	2.85	F	3.25	2.90	3.20	3.15	2.90	2.65	2.50
9	F	F	F	F	2.90 <sub>F</sub>	F	3.05 <sub>F</sub>	U3.10 <sub>F</sub>	3.10	2.90	2.70	2.40
10	U2.95 <sub>F</sub>	2.85	F	F	F	U3.10 <sub>F</sub>	3.00	3.10	2.95	2.80	2.60	2.50
11	2.40	U2.50 <sub>F</sub>	3.00	2.95	U2.85 <sub>s</sub>	J2.85 <sub>s</sub>	2.70	2.75	2.65	2.50	2.50	2.40
12	F <sub>s</sub>	U2.80 <sub>F</sub>	F	3.00	3.10	3.25	2.65	2.75	2.60	2.50	2.45	2.35
13	2.65 <sub>F</sub>	2.80	3.05	3.15	3.10	3.15	2.75	2.75	2.60	2.45	2.45	2.45
14	2.85	3.05	3.15	3.00	J2.90 <sub>s</sub>	J2.90 <sub>s</sub>	3.05	2.80	2.75	2.40	2.30	2.40
15	3.15	3.20	U3.20 <sub>s</sub>	U3.45 <sub>s</sub>	3.25	2.65	U2.60 <sub>s</sub>	2.80	2.75	C	C	2.30
16	F	F	F <sub>s</sub>	3.20	J3.00 <sub>F</sub>	E	2.60	2.80	2.60	2.65	2.40	2.30
17	F	F	F	U3.25 <sub>F</sub>	3.30	3.30	2.90	3.00	U2.70 <sub>s</sub>	C	C	C
18	3.05	3.20	3.20	3.20	3.40	3.30	U2.90 <sub>C</sub>	2.90	2.65	2.50	2.40	2.40
19	3.20	3.10	3.15	3.20	3.30	3.35	U2.80 <sub>R</sub>	3.15	2.90	2.45	2.40	2.40
20	3.00	3.20	3.20	3.10	U3.50 <sub>s</sub>	3.40	2.95	3.15	2.80	2.45	2.50	2.40
21	2.90	3.10	3.00	3.45	3.25	3.15	3.35	3.50	3.25	2.95	C	2.30
22	U3.00 <sub>s</sub>	J3.20 <sub>s</sub>	3.05	3.10	3.20	3.35	2.95	3.30	3.00	2.70	2.50	2.30
23	2.95	2.85	2.80	U3.05 <sub>s</sub>	3.20	3.20	3.20	3.20	3.00	2.65	2.30	C
24	2.90	2.95	3.00	2.90	3.05	3.15	3.20	3.10	3.15	2.95	2.70	2.45
25	2.85	F	F	2.75	3.10	3.25	3.30	3.15	2.90	2.45	2.20	2.25
26	U2.80 <sub>F</sub>	F	U3.10 <sub>F</sub>	F	2.95	3.30	3.10	2.90	2.65	2.45	2.35	2.25
27	F	F	F	U3.00 <sub>s</sub>	3.15	3.15	2.65	2.90	2.70	2.40	2.35	2.25
28	F	F	F	F	F	3.20	U2.75 <sub>R</sub>	U2.75 <sub>s</sub>	U2.60 <sub>s</sub>	2.55	2.45	2.30
29	F	F	F	F	U3.15 <sub>s</sub>	3.30	3.05	U2.90 <sub>s</sub>	2.45	2.40	2.45	2.30
30	F	2.75	F	3.30	3.25	3.30	2.60	2.80	2.55	2.45	2.40	2.30
31	F	F	F	F	F	3.30	2.65	2.90	2.50	2.50	2.45	2.35
Count	20	19	18	24	27	30	30	30	31	29	28	29
Median	2.95	3.05	3.10	3.10	3.20	3.25	2.90	2.95	2.75	2.50	2.40	2.35
Mean	2.90	2.95	3.05	3.10	3.15	3.20	2.90	3.00	2.80	2.55	2.40	2.35

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M 3000) F2

Unit : ...

Month: January 1960

TABLE 11 (Contd.)

Ionospheric Data

75.0 E Mean Time

Latitude: 10.2°N

Longitude: 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
2.35	2.35	2.35	2.35	2.35	U2.25s	2.15	2.05F	F	F	F	F	1
2.30	2.30	2.30	2.40	2.35	2.30	2.15	U2.05s	2.05F	F	F	F	2
2.30	2.30	2.30	2.30	2.20	2.00	2.10	U2.05F	F	F	F	F	3
2.25	2.20	2.20	2.25	2.35	2.35	U2.25s	2.15	2.35	2.70	2.85	2.90	4
2.20	2.10	U2.10s	2.25	2.20	2.30	U2.30s	U2.30F	F	2.80	2.90	3.10	5
2.20	2.15	2.20	2.20	2.25	2.25	2.25	2.25	2.25	2.30	2.55	2.75	6
2.25	2.30	2.25	2.20	2.10	2.25	2.30	2.10F	2.10F	2.25F	2.55	2.65	7
2.20	2.00	2.15	2.15	2.15	2.20	2.30	2.10F	F	F	F	F	8
2.10	2.15	2.15	2.15	2.25	2.20	2.20	U1.90F	F	F	F	F	9
2.45	2.25	2.35	2.40	2.35	2.30	2.05	2.00H	U2.00FH	S	2.40	U2.35F	10
2.40	2.35	2.25	2.20	2.30	2.20	2.10	2.05	U2.10F	F	F	F	11
2.30	2.40	2.40	C	2.45	2.30	U2.20s	2.15	2.10	2.10	2.35	U2.50F	12
2.50	2.50	2.50	2.50	2.40	2.25	U2.05sH	2.20	F	2.50	2.65	2.75	13
2.45	2.60	2.50	2.45	2.35	2.20	2.10	2.20	2.40	2.60	2.80	2.95	14
2.20	2.15	2.30	2.30	2.30	2.30	2.15	U2.20s	F	F	F	F	15
2.30	2.35	2.40	2.50	2.50	2.50	2.35	U2.20F	F	F	F	F	16
C	C	C	C	C	2.35	U2.30s	2.25	2.30	U2.50s	2.60	2.80	17
2.30	2.20	2.20	2.40	2.55	2.65	2.60	2.50	U2.40R	U2.80s	3.10	3.20	18
2.35	2.30	2.35	2.40	2.50	U2.40s	2.20	2.05	U2.10F	F	F	3.00	19
2.40	2.25	2.25	2.30	2.30	2.35	2.35	2.35	U2.45s	U2.70s	F	U2.85s	20
2.15	2.20	2.25	2.35	2.35	U2.35s	U2.10s	2.40	2.70	U2.80s	U2.75s	2.90	21
2.25	C	2.30	2.30	2.25	U2.05s	S	U2.10F	F	U2.70F	2.80	2.85	22
2.25	C	2.10	U2.00w	2.10	2.20	C	U2.10w	U2.20wF	C	C	2.70	23
2.30	2.00	2.05	2.15	2.20	2.25	2.20	F	F	F	F	F	24
2.20	2.10	2.10	2.15	2.15	U2.20s	U2.20s	2.05	U2.00F	F	F	F	25
2.20	2.20	2.20	C	U2.25s	U2.20s	U2.05s	U1.95F	F	F	F	F	26
2.20	2.15	2.10	2.10	2.15	U2.10s	U2.05s	1.90w	F	F	F	F	27
2.30	2.35	2.40	2.45	2.50	2.50	2.15H	F	F	F	F	F	28
2.20	2.20	2.30	2.40	2.40	2.40	2.20H	2.10Fs	F	F	F	F	29
2.25	2.20	2.30	C	C	C	2.30	U2.15s	F	F	F	F	30
2.35	2.35	2.35	2.35	2.30	2.20	U2.05s	U1.90w	F	F	F	F	31
30	28	30	27	29	30	29	29	15	12	12	15	Count
2.30	2.20	2.30	2.30	2.30	2.25	2.20	2.10	2.20	2.65	2.70	2.85	Median
2.30	2.25	2.25	2.30	2.30	2.30	2.20	2.15	2.25	2.55	2.70	2.80	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic: (M3000)F2

Unit : ...

Month : January 1960

TABLE 11 (Contd.)

Ionospheric Data

75.0 E Mean Time

Latitude: 10.2°N

Longitude: 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	F	F	3.20	3.25	3.25	3.30	C	2.85	2.50	2.25	2.35	2.30
2	F	F	F	3.30	3.40	3.30	2.90	2.70	2.50	2.30	2.30	2.35
3	U2.80F	F	2.95	3.10	3.35	3.40	3.30	3.10	2.90	2.40	2.30	2.35
4	3.00	3.15	3.20	3.20	3.30	3.20	2.95	2.80	2.55	2.35	2.40	2.35
5	3.15	3.10	3.10	3.10	3.20	3.20	3.10	3.05	2.55	2.45	2.35	2.30
6	2.90	2.90	U2.95s	3.05	3.25	3.10	3.10	2.90	2.65	2.40	2.20	2.10
7	U3.05s	3.00	2.95	3.15	3.20	3.35	3.10	2.90	2.65	2.30	2.20	2.15
8	U2.70s	2.80	2.85	3.00	U3.15F	3.40	3.25	3.25	3.05	2.75	2.55	2.35
9	F	F	U3.05F	F	F	U3.15F	U3.05F	U3.15F	2.95	2.75	2.55	2.25
10	U3.05F	U2.85F	F	U2.95F	2.95F	3.20F	3.05	3.05	2.90	2.70	2.50	2.45
11	U2.65s	2.80	3.05	U2.85s	2.85	2.85	2.45H	2.60	2.60	2.50	2.45	2.40
12	F	F	F	3.00	3.10	3.40	2.80	2.70	2.55	2.45	2.40	2.30
13	F	3.00	3.15	3.10	3.10	3.20	2.90	2.70	2.50	2.50	2.40	2.40
14	3.00	3.20	3.20	U3.00s	U2.90s	3.05	2.90	2.80	2.55	2.30	2.35	2.40
15	3.30	3.10	U3.20s	3.20	2.90	2.20	2.80	2.75	2.65	2.50	C	2.25
16	F	U3.25s	U3.40Fs	F	U3.25R	E	2.90	2.70	2.60	2.50	2.40	2.30
17	F	F	F	3.35	U3.40R	3.40	3.05	2.90	C	C	C	C
18	3.20	U3.20s	3.20	3.20	U3.35R	3.35	3.00	2.80	2.50	2.50	2.55	2.40
19	3.10	3.15	3.15	3.30	3.40	3.30	3.10	C	2.70	2.30	2.40	2.40
20	3.10	3.20	3.15	3.20	3.35	3.40	3.10	3.00	2.65	2.40	2.45	2.40
21	F	3.15	3.20	3.40	3.20	3.30	3.30	3.40	3.10	C	C	2.05
22	S	3.10	3.10	3.20	3.30	3.45	3.20	3.10	2.90	2.55	2.35	2.25
23	U2.90s	2.80	U2.90s	3.05	3.20	3.30	3.30	3.05	C	2.50	2.30	2.25
24	2.95	3.00	2.90	2.95	3.10	3.30	3.20	3.10	3.00	2.80	2.60	2.40
25	F	F	U2.65F	2.95	3.15	3.30	3.20	2.95	2.75	2.30	2.25	2.20
26	F	U3.05F	U3.00F	3.00	3.10	3.30	2.95	2.70	2.55	2.40	2.30	2.20
27	F	F	U2.90s	3.05	U3.20s	3.30	2.90	2.80	2.50	2.35	2.35	2.20
28	F	F	F	U3.35s	3.15	3.30	U2.70s	U2.70s	2.60	2.45	2.35	2.30
29	F	F	F	U3.10F	Fs	F	3.00	2.70	2.45	2.45	2.35	2.25
30	F	F	3.15	3.15	3.20	3.30	2.85	U2.65s	2.45	2.45	2.35	2.25
31	U2.60F	F	F	3.20	3.30	3.30	3.00	U2.70s	2.40	2.45	2.40	2.35
Count	16	19	24	29	29	29	30	30	29	29	28	30
Median	3.00	3.10	3.10	3.10	3.20	3.30	3.00	2.80	2.60	2.45	2.35	2.30
Mean	2.95	3.05	3.05	3.15	3.20	3.25	3.00	2.90	2.65	2.45	2.40	2.30

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M3000) F2

Unit : ..

Month: January 1960

TABLE 11 (Contd.)

Ionospheric Data

75.0 E Mean Time

Latitude: 10.2°N

Longitude: 77.5°N

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.35	2.35	2.35	2.30	2.35	U2.25s	2.10	F	F	F	F	F	1
2.30	2.30	2.35	2.35	2.30	2.20	U2.15s	2.05F	F	F	F	U2.60F	2
2.30	2.30	2.30	2.20	U2.15s	2.15	2.10	F	F	F	F	U2.80F	3
2.30	2.25	2.25	2.30	2.40	2.30	2.20	2.25	2.50	2.85	2.80	2.95	4
2.15	2.05	2.20	2.25	2.25	U2.30s	U2.30F	U2.30F	2.70	2.90	3.05	3.05	5
2.20	2.10	2.15	2.20	2.30	2.25	2.20	2.20	2.20	U2.45s	2.65	2.85	6
2.25	2.20	2.20	2.10	2.10	2.30	2.20	2.10F	U2.10F	U2.35F	U2.40F	2.70	7
2.10	2.10	2.20	2.20	2.10	2.30	2.20	U2.10F	F	F	F	F	8
2.00	2.15	2.15	2.25	2.25	2.15	2.15	U2.05F	F	F	F	Fs	9
2.40	2.25	2.35	2.40	2.35	2.15	2.00H	U2.00FH	2.05H	S	U2.40F	U2.30s	10
2.40	2.30	2.20	2.20	2.30	2.15	2.05	F	F	F	F	F	11
2.35	2.40	C	2.45	2.40	2.25	U2.15s	2.10	2.05	F	2.40	F	12
2.50	2.50	2.50	2.50	2.30	2.10H	S	U2.05s	F	2.65	2.55	2.90	13
2.50	2.50	2.50	2.45	2.30	2.10	S	2.35	2.50	2.65	2.80	3.05	14
C	2.20	2.35	2.30	2.25	U2.20s	2.10	Fs	F	F	F	F	15
2.30	2.40	2.50	2.50	2.55	2.45	2.25	F	F	F	F	F	16
C	C	C	C	C	U2.30s	U2.30s	2.20	2.30	U2.50s	2.70	2.90	17
2.25	2.20	2.30	2.60	2.65	2.65	2.50	U2.55s	U2.70R	U3.00s	3.15	U3.15Fs	18
2.30	2.30	2.40	2.45	U2.50s	U2.40s	2.10	U2.00F	F	F	U2.80Fs	U3.00s	19
2.30	2.20	2.30	2.30	2.35	2.35	2.35	U2.40F	U2.70s	U2.70s	F	2.90	20
C	2.30	2.35	2.40	2.30	U2.20s	U2.25s	2.50	2.70	U2.90s	2.85	U3.00s	21
C	2.30	2.30	2.25	C	U2.05s	2.15	F	F	2.75	2.90	2.90	22
2.30	2.20	C	C	C	U2.20s	C	C	U2.40F	U2.60F	C	2.85	23
2.15	U1.95W	2.15	2.15	2.20	2.20	U2.15F	F	F	F	F	F	24
2.15	2.15	2.10	2.15	2.15	2.15	2.20	2.05	F	F	F	F	25
2.25	2.20	C	2.20	2.25	U2.10s	U2.00s	F	F	F	F	F	26
2.20	2.10	2.15	2.10	2.15	U2.10s	1.95	F	F	F	F	F	27
2.25	2.40	2.45	2.45	2.45	2.30	2.00H	F	F	F	F	F	28
2.20	2.25	2.35	2.40	2.40	2.30	2.10H	F	F	F	F	F	29
2.20	2.25	2.35	C	C	2.35	2.20	2.05	F	F	F	F	30
2.30	2.35	2.35	2.35	2.30	2.10	1.95	U1.95s	F	F	F	F	31
27	30	27	28	27	31	28	19	12	12	13	16	Count
2.30	2.25	2.30	2.30	2.30	2.20	2.15	2.10	2.45	2.70	2.80	2.90	Median
2.25	2.25	2.30	2.30	2.30	2.25	2.15	2.15	2.40	2.70	2.75	2.85	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF2

Unit : Mc

Month: February 1960

TABLE 12  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	F	F	F	F	6.6	4.2	4.3	8.4	10.2	10.2	10.0	10.0
2	10.5	10.6	10.2	9.0	7.3s	4.9	4.5	9.0	11.6	12.4	11.6	11.2
3	11.6	11.0	11.1	10.6	9.6	8.0	7.4	10.1	11.8	11.7	11.5	11.6
4	10.5	10.5	9.8	F	7.7	5.1	4.8	9.4	12.2	12.8	12.4H	11.0
5	U9.4F	U9.6F	8.5	F	8.5	9.4	9.1	11.2	13.0	13.7	13.6	12.2
6	U9.8s	9.8	10.5	11.2	9.9	6.9	6.6	U10.0s	11.6	12.8	13.3	13.4
7	8.3	C	C	C	C	C	C	C	C	12.7	11.7	C
8	F	F	F	U7.3s	6.7F	6.0	5.5	9.5	12.0	13.3	13.8	13.8
9	U10.0F	U11.0F	U10.8F	9.9	7.8	4.5	4.4	8.6	11.6	13.0	13.1	12.5
10	U11.0F	U10.4F	F	F	F	U4.6F	F	8.3F	10.3	11.0	11.0	11.4
11	F	U9.7F	F	8.3	7.5	F	U5.2s	8.7	11.3	11.8	11.9	11.9
12	U9.8s	F	11.7	U9.8s	Fs	8.3	F	U9.1s	11.9	13.1	12.7	12.3
13	F	Fs	Fs	U7.2s	U6.0s	3.8	4.3	C	11.3	12.3	11.9	11.5
14	11.5	11.3	9.2	U5.8s	U4.2s	F	U5.4F	7.7	10.3	11.5	11.3	10.8
15	10.8	U9.9s	U7.7s	U7.3s	7.3	6.8	7.2	10.6	12.5	13.5	13.3	11.9
16	F	11.6	10.3	8.6	5.6	3.7	4.0	U8.1s	10.8	11.0	C	C
17	10.0	F	U7.6Fs	U6.8s	5.6	3.2	4.2	8.6	11.0	12.5	12.1	10.6
18	10.8	11.4	12.0	10.9	9.0	8.4	6.5	9.5	11.6	12.2	13.6	14.2
19	U12.6s	11.5	11.4	11.3	9.6	5.7H	4.9	8.8	10.8	10.8	10.7	10.5
20	8.6	9.0	8.8	U7.6s	6.6	U7.3s	7.2	9.3	12.1	13.2	13.5	C
21	11.5	11.0	10.5	9.4	6.8	5.4	35.1s	8.9	10.8	11.7	12.3	12.4
22	U12.0s	12.4	9.9	8.7	8.6	U7.2s	5.8	9.4	U12.0s	13.3	13.0	11.6
23	11.2	10.8	9.6	9.1	U9.9s	8.4	5.8	9.0	11.3	12.0	10.8	10.4
24	12.2	13.0	U12.0s	8.4	7.6	5.2	4.5	8.4	10.5	10.8	10.4	9.8
25	F	U10.4s	9.0	F	5.0	2.5	4.0	8.7	11.0	11.8	9.8	9.4
26	F	F	F	5.6	5.0F	3.5	4.3	8.7	10.9	11.1	10.2	9.8
27	11.6s	9.0s	F	F	F	3.2	4.6	8.4	10.7s	10.9	10.8	10.2
28	U10.2s	U9.2s	8.2	U7.2s	6.2s	6.0	5.8	9.7s	11.6	12.3	10.9	10.0
29	10.6	F	F	5.8s	F	F	4.2Fs	8.6	10.9	12.3	12.1RH	9.6

Count	22	21	20	22	24	25	26	27	28	29	28	26
Median	10.7	10.6	10.0	8.5	7.3	5.4	5.0	8.9	11.3	12.3	11.9	11.3
Mean	10.7	10.6	9.9	8.4	7.3	5.7	5.4	9.1	11.3	12.1	11.9	11.3

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF2  
Unit : Mc  
Month: February 1960

TABLE 12 (Contd.)  
Ionospheric Data  
75.0°E Mean Time

Latitude : 102.°N  
Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
C	10.2	10.6	11.0	11.4	12.2	12.4	11.4	11.4	11.6	11.4	U10.2s	1
11.0	11.3	11.8	12.2	12.2	12.2	11.4	10.7	Fs	F	12.2	U12.1s	2
11.8	12.2	12.6	12.8	13.4	13.2	12.6	10.8	F	F	F	F	3
11.2	10.9	11.1	11.5	11.6	11.5	11.0	8.8	U8.6F	Fs	F	F	4
C	11.8	11.6	11.6	11.6	11.4	10.6	10.2	9.4	9.3	9.5	10.3	5
13.7	13.2	12.9	13.1	12.6	11.8	10.4	8.7	8.8F	U9.8F	F	U8.2F	6
C	C	C	10.7	10.5	10.5	10.2	8.4F	F	F	F	F	7
C	12.6	12.6	12.6	C	11.6	10.2	9.0	F	F	F	U10.6F	8
11.6	11.3	11.0	10.8	11.0	10.8	10.6	9.2	F	F	F	F	9
12.0	12.6	13.2	13.4	13.5	13.1	U12.0s	U10.8F	F	F	F	U9.4F	10
11.9	12.5	12.4	12.2	11.8	11.3	10.6	9.4	F	U8.5F	F	F	11
12.4	12.7	13.2	13.6	13.7	13.1	U11.9s	C	C	C	C	F	12
11.3	11.6	11.7	12.2	12.5	11.9	11.4	U9.6F	F	F	F	F	13
11.0	11.3	11.3	11.6	11.0	10.3	U10.1s	U9.4s	U9.3s	9.7	U9.7F	10.7	14
11.7	11.8	12.3	12.6	12.7	12.5	U11.7s	9.5F	F	F	F	F	15
10.8	11.6	12.0	12.4	12.6	12.4	11.8	U9.8s	F	F	F	F	16
10.2	9.8	10.4	11.2	11.0	10.8	10.4	U9.6s	J8.2F	U8.6F	U10.4s	10.6	17
13.8	15.0	J15.6s	15.0	14.8	U14.6s	U14.4R	13.0	U11.7s	U11.6s	U11.8s	12.7	18
10.4	10.4	10.6	10.6	10.8	10.6	10.0	9.2	U8.8R	U9.0s	F	F	19
13.0	12.2	11.7	11.6	U11.8s	12.2	U11.6s	10.4	U10.0s	11.2	U11.6s	11.4	20
11.7	11.7	12.6	12.6	12.4	U11.2R	11.0	10.3	U9.4s	U9.5s	10.0	U11.0Fs	21
10.8	10.5	10.7	10.9	11.0	U11.0s	U9.7s	U9.6s	F	F	U9.6s	10.6	22
10.9	11.4	11.5	12.0	13.0	13.0	U12.2s	10.8	U9.4s	F	10.2	11.6	23
C	9.8	9.8	9.8	9.8	9.8	9.3	8.6	U8.0F	C	C	C	24
9.3	9.4	9.8	10.4	U10.2s	U10.2s	9.4s	7.8	F	F	F	F	25
9.8	10.7	11.4	11.6	U12.1R	U12.0R	11.6	9.8s	F	F	F	12.4s	26
10.3	10.5	10.2	10.1	10.5s	10.6	10.5s	9.6s	10.6	S	12.3	10.8	27
9.5	9.3	9.7	10.6	11.2	11.4	11.0s	9.4	F	F	F	F	28
9.6	10.1	10.5	11.4	12.3	12.0	11.6	9.8	F	F	F	F	29
24	28	28	29	28	29	29	28	13	10	11	15	Count
11.1	11.4	11.6	11.6	11.8	11.6	11.0	9.6	U9.4	U9.6	10.4	10.7	Median
11.2	11.4	11.6	11.8	11.9	11.7	11.1	9.8	U9.5	U9.9	10.8	10.8	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF2  
Unit : Mc  
Month : February 1960

TABLE 12 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude 10°2'N  
Longitude 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	F	F	9.4	8.0	5.2	3.2	6.6	9.6	10.2	10.0	10.1	10.0
2	10.7	10.5	9.6	8.3	16.3R	3.6	7.0	10.6	12.2	12.4	11.4	11.0
3	11.0	11.2	11.0	10.0	9.0	7.7	8.6	11.0	12.0	11.5	11.6	11.7
4	10.5	F	F	8.5F	6.8	4.0	U7.3s	11.0	12.6	13.2	10.8	11.4
5	9.6	U9.2F	F	F	9.3	9.3	9.8	12.5	13.6	13.6	12.6	C
6	U9.8s	9.9	11.0	10.8	8.0	6.4	8.3	11.0	12.4	13.3	13.6	13.6
7	C	C	C	C	C	C	C	C	C	C	C	C
8	F	U7.8F	6.9	U7.0F	U6.6F	5.5	7.5	11.0	12.7	13.4	13.9	13.5
9	U11.6F	11.2F	10.4	8.7	6.2	3.5	6.8	10.4	12.5	13.3	13.0	12.1
10	F	U10.7F	F	F	U5.6F	F	U6.8F	9.4	10.7	11.0	11.3	11.7
11	F	U9.6F	U8.7F	8.0	6.7	4.8	7.0	10.3	11.7	11.8	12.0	12.0
12	F	U11.9s	10.9	9.1	U8.6F	F	F	10.6	13.0	12.8	12.6	12.3
13	F	Fs	U7.6s	U6.5Fs	U4.7F	3.1	6.4	C	11.8	12.4	11.7	11.3
14	11.4	U10.2s	7.3	U4.6s	U4.4s	U4.3F	6.5	9.5	11.0	11.6	10.6	10.8
15	U10.4s	8.7	U7.5s	U7.1s	7.2	6.8	8.8	11.5	12.7	13.2	12.7	11.7
16	F	F	9.8	U7.2s	4.4	2.9	6.2	10.0	11.0	11.1	C	10.8
17	F	Fs	U7.5s	Fs	4.1	2.9	6.6	10.0	12.0	12.6	11.3	10.4
18	11.0	U11.6s	11.8	9.6	8.9	7.6	U7.6s	10.8	12.0	12.8	14.0	14.0
19	12.2	11.6	11.6	10.5	7.2	4.4	7.0	10.0	10.9	11.0	10.8	10.5
20	8.8	U9.2s	8.4	7.0	7.0	7.2	8.1	11.0	12.7	13.2	13.7	13.6
21	11.1	10.8	10.5	8.2	6.4	4.7	17.3s	10.2	11.6	11.9	12.4	12.0
22	12.5	11.5	U9.2s	8.6	8.4	5.9	7.8	10.6	12.7	13.3	12.1	11.1
23	11.1	10.6	9.1	9.4	9.6	6.7	7.5	10.4	11.8	11.7	10.6	10.6
24	12.4	13.1	10.0	8.0	6.6	4.3	6.8	9.8	10.7	10.5	10.0	9.5
25	F	U9.4s	U7.8s	F	3.5	U2.0R	6.7	U10.2s	11.8	11.1H	9.5	9.3
26	F	F	6.4s	5.0	F	2.8	6.6	U10.2s	11.3	10.3	9.9	9.8
27	F	F	F	4.3	3.6	2.9F	U6.8s	9.8s	10.9	10.8	10.5	10.1
28	U9.8s	8.8	7.8	6.6	6.0s	5.5	7.6	10.8	12.0	12.0	10.6	9.8
29	10.2s	F	6.8	5.3	F	F	6.8	10.1s	11.6	12.6	U11.1RH	9.5

Count	17	20	24	24	26	25	27	27	28	29	27	27
Median	11.0	10.6	9.2	8.0	6.6	4.4	7.0	10.4	11.9	12.2	11.4	11.1
Mean	10.8	10.4	9.0	7.8	6.6	4.9	7.3	10.4	11.9	12.1	11.6	11.3

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF2

Unit : Mc

Month : February, 1960

TABLE 12 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
10.2	10.5	10.8	11.2	11.6	12.4	U12.0s	11.3	11.6	U11.4s	10.8	10.2	1
11.1	11.5	12.0	12.2	12.2	U11.6s	U11.0R	U9.6s	F	11.0	12.2	U12.0s	2
12.1	12.2	12.7	13.3	13.4	13.0	11.4	U10.4F	F	F	F	10.4	3
11.0	10.9	11.2	11.6	11.5	11.4	U9.7s	U8.6F	C	Fs	U10.0F	9.6	4
11.6	11.6	11.7	11.6	11.6	10.8	10.5	10.0	9.1	9.2	10.0	10.5	5
13.4	12.9	13.1	12.7	11.8	11.0	9.2	U8.6F	U9.2F	9.6F	8.5	U7.8F	6
C	C	10.8	10.6	10.5	10.5	9.6	F	F	F	F	U7.8F	7
12.7	12.6	12.6	C	C	11.2	9.6	8.8	F	F	U10.4F	F	8
11.6	11.2	10.8	10.9	11.0	10.8	10.2	F	F	F	F	F	9
12.3	13.0	13.1	13.7	13.0	U12.4R	U11.5s	F	F	F	F	F	10
12.1	12.7	12.2	12.3	11.5	10.8	U9.9R	U8.6F	F	F	F	10.3	11
12.4	12.8	13.3	13.7	13.2	12.7s	11.0	C	C	C	C	F	12
11.4	11.7	11.8	12.6	12.4	11.6	10.7	U8.8F	F	F	F	Fs	13
10.9	11.5	11.5	11.2	10.6	10.1	U9.7s	9.1	9.4F	9.5	Fs	10.7	14
11.8	12.3	12.4	12.7	12.6	J12.2s	10.7s	F	F	F	F	F	15
11.2	11.6	12.2	12.6	12.5	U11.8s	10.8	F	F	F	F	10.9	16
9.8	9.8	10.8	11.2	11.0	U10.6s	U10.2s	U8.6F	F	U9.4s	10.4	10.8	17
14.6	U15.4s	U15.4s	15.0	14.6	14.6	U13.8R	12.0	12.0	U11.8s	J12.4R	12.6	18
10.3	10.4	10.6	10.6	10.8	10.2	9.4	9.3	9.0	8.5	F	8.6	19
12.5	11.8	11.6	11.6	12.2	U12.0s	11.0	10.4	U10.3Fs	U11.4s	U11.6s	11.0	20
11.7	J12.0s	12.7	12.7	J12.0R	11.0	10.8	U9.4s	U9.3F	10.0	10.8	U11.2s	21
10.5	10.7	10.9	10.8	10.9	U10.8s	U9.6s	9.5	U9.0F	U9.3Fs	9.9	11.4	22
11.4	11.4	11.7	12.5	13.1	12.6	11.5	U9.6s	U9.4F	U9.7F	10.8	12.2	23
9.6	9.8	9.9	9.8	9.7	9.4	9.0	U8.0F	F	F	F	F	24
9.2	9.6	10.0	10.4	U10.3s	9.7s	8.9	F	F	F	F	F	25
10.2	11.1	11.5	12.0	U12.2R	12.0s	11.2R	F	F	F	F	F	26
10.3	10.1	10.1	10.2	10.6	10.6	10.0	9.8	11.4	12.4	11.5s	U10.2s	27
9.4	9.4	10.0	10.9	11.3	11.3	10.5	F	F	F	F	F	28
9.8	10.2	10.8	11.7	11.9	11.7	10.8	U9.2W	U9.0F	U8.8F	F	F	29
28	28	29	28	28	29	29	20	12	14	13	18	Count
11.3	11.5	11.6	11.6	11.7	11.3	10.5	9.4	9.4	9.6	10.8	10.6	Median
11.2	11.5	11.7	11.9	11.8	11.4	10.5	9.5	9.9	10.1	10.7	10.5	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : foF1

Unit : Mc

Month : February, 1960

TABLE 13  
Ionospheric Data  
75 0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5												
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15												
16								L	L	L	C	C
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20												
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25												
26								L	L	L	5.2L	L
27								L	L	L	5.0L	5.0
28								L	L	L	L	L
29								L	L	L	L	L

Count	..	..	..	2	1
Median	..	..	..	..	..
Mean	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF1

Unit : Mc

Month : February, 1960

TABLE 13 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
C	L	L	L	L	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
C	L	L	L	L	L							5
L	L	L	L	L								6
C	C	C	L	L								7
C	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L <sub>H</sub>	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
C	L	L	L	L	L							24
L	L	L	L	L	L							25
L <sub>H</sub>	L	L	L <sub>H</sub>	L	L							26
L	L	L	L	L	L							27
L	L	L <sub>H</sub>	L	L	L							28
L	L	L <sub>H</sub>	L	L	L							29
												Count
												Median
												Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF1  
Unit : Mc  
Month : Februray, 1960

TABLE 13 (Contd.)  
Inospheric Data  
75°0'E Mean Time

Latitude : 10.2°N  
Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4							L	L	L	L	L	L
5								L	L	L	L	C
6								L	L	L	L	L
7							C	C	C	C	C	C
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16								L	L	L	C	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20							L	L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25								L	L	u5.0L	L	5.2L
26								L	L	L	L	L
27								L	L	L	L	LH
28								L	L	L	L	5.2
29								L	L	L	4.9	L

Count	...	..	..	1	1	2
Median	..	..	..	..	..	..
Mean	..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF1

Unit : Mc

Month : February, 1960

TABLE 13 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L								5
L	L	L	L	L								6
L	L	L	L	L								7
C	C	L	L	C								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L								11
L	L	L	L	L								12
L	L	L	L	L								13
L	L <sub>H</sub>	L	L	L								14
L	L	L	L	L								15
L	L	L	L	L								16
L	L	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L								26
L	L	L	L	L								27
L	L <sub>H</sub>	L	L	L								28
L	L	L <sub>H</sub>	L	L								29
												Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean
..	..	..	..	..	..							

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE

Unit : Mc

Month : February, 1960

TABLE 14  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								A	A	A	A	A
2								2.6	A	A	A	A
3								2.5	A	A	A	A
4								2.6	A	A	A	A
5								2.5H	A	A	A	A
6								2.5H	A	A	A	A
7								C	A	A	A	C
8								2.4	A	A	A	A
9								2.5	A	A	A	A
10								A	A	A	A	A
11								2.4	A	A	A	A
12								2.5H	A	A	A	A
13								C	A	A	A	A
14								A	A	A	A	A
15								2.3H	A	A	A	A
16								A	A	A	C	C
17								2.4	A	A	A	A
18								2.5H	3.0	A	A	A
19								A	A	A	A	C
20								2.4H	U3.2R	A	A	A
21								A	A	A	A	A
22								2.5	A	A	A	B
23								R	A	A	A	A
24								A	A	A	A	A
25								2.5H	A	A	A	A
26								2.4	A	A	A	A
27								A	A	A	A	A
28								R	A	A	A	A
29								2.5H	3.1	A	A	A

Count	17	3	..	..	..
Median	2.5	..	..	..	..
Mean	2.5	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE

Unit : Mc

Month : February, 1960

TABLE 14 (Contd.)

## Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
												1
C	A	A	A	A	A							2
A	A	A	A	A	A							3
A	B	B	B	A	A							4
A	A	A	A	A	A							5
C												6
A	A	A	A	A	A							7
C	C	C	A	A	A							8
A	A	A	A	A	A							9
A	A	A	A	A	A							10
												11
A	A	A	A	A	A							12
A	A	A	A	A	A							13
A	A	A	A	A	A							14
A	A	A	A	A	A							15
												16
A	A	A	A	A	A							17
A	A	A	A	A	A							18
A	A	A	A	A	A							19
A	A	A	A	A	A							20
												21
A	A	A	A	A	A							22
A	A	A	A	A	A							23
R	A	A	A	A	A							24
C	A	A	A	A	A							25
A												26
A	A	A	A	A	A							27
A	A	A	A	A	A							28
A	A	A	A	A	A							29

Table 1. Summary of the data for the 1000 simulated datasets.						Count
..	..	..	..	1	1	
..	..	..	..	..	..	Median
..	..	..	..	..	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE  
Unit : Mc  
Month : February, 1960

TABLE 14 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								A	A	A	A	A
2							2.0	A	A	A	A	A
3							2.1	A	A	A	A	A
4								3.0	A	A	A	A
5								2.8	A	A	A	C
6							C	A	A	A	A	A
7								C	A	A	A	A
8								2.9	A	A	A	A
9								2.9	A	A	A	A
10							2.9H	A	A	A	A	A
11							2.1	A	A	A	A	A
12								A	A	A	A	A
13								C	A	A	A	A
14							2.0	A	A	A	A	A
15								A	A	A	A	A
16								U2.6R	A	A	A	A
17							1.7	A	A	A	C	A
18								A	A	A	A	A
19								2.8	3.3	A	3.8	A
20							2.0H	A	A	A	A	A
21							U2.0R	3.0	U3.4R	A	A	A
22							1.8	A	A	A	A	A
23								2.9	A	A	A	A
24							R	U3.2RF	A	A	A	A
25							U2.3R	A	A	A	A	A
26							R	A	A	A	A	A
27							R	A	A	A	A	A
28							R	3.0	A	A	A	A
29							2.3	2.9H	A	A	A	A

Count	11	11	2	..	1	..
Median	2.0	2.9	..	..	..	..
Mean	2.1	2.9	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds,

Characteristic : foE

Unit : Mc

Month : February, 1960

TABLE 14 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10.2°N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	A	A	A								1
A	A	A	A	A	A							2
A	B	A	3.6	A	F							3
A	A	A	A	A	2.2							4
A	A	A	A	A								5
A	A	A	A	A								6
C	C	A	A	A								7
A	A	A	C	C								8
A	A	A	A	A								9
A	A	A	A	A								10
A	A	A	A	A								11
A	A	A	A	A								12
A	A	A	A	A								13
A	A	A	A	A								14
A	A	A	A	A	A							15
A	A	A	A	A								16
A	A	A	A	A								17
A	A	A	A	A								18
A	A	A	A	A								19
A	A	A	A	A								20
A	A	A	A	u2.8A	A							21
A	A	A	A	A								22
A	A	A	A	A								23
A	A	A	A	A								24
A	A	A	A	A								25
A	A	A	A	2.7								26
A	A	A	u3.2A	2.9R	F							27
A	A	A	A	A	2.2R							28
A	A	A	A	A	A							29
A	A	A	A	A	A							29
												Count
..	..	..	* 2	3	2							Median
..	..	..	..	..	..							Mean
..	..	..	..	..	..							

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : foEs

Unit : Mc

Month : February, 1960

TABLE 15

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								6.8	10.6	10.8	11.4	11.6
2								G	9.2	11.4	11.6	12.0
3			4.5					S	10.4	11.2	12.0	10.6
4	4.1		3.0					G	9.2	10.4	12.0	11.6
5					1.9			G	8.4	11.6	12.6	12.6
6								4.4	9.6	10.9	12.4	12.2
7		C	C	C	C	C	C	C	C	12.0	13.4	C
8				3.6				G	11.0	11.0	12.8	13.0
9								U5.6s	10.6	12.0	13.0	13.0
10								9.8	10.8	13.0	12.0	10.8
11								U6.6s	10.9	11.2	12.0	12.2
12								3.1	9.8	10.2	10.9	10.4
13								C	11.5	12.0	12.8	12.7
14								7.4	9.8	12.1	12.6	13.5
15				2.0				G	U8.1s	11.7	12.6	12.9
16			2.8					8.4	11.0	12.4	C	C
17								G	9.0	11.0	12.0	13.4
18								G	G	9.0	12.0	12.4
19		4.0	4.4					U5.0s	10.6	11.4	12.0	12.4
20								G	G	12.0	12.0	C
21								U7.0s	U9.6s	9.4	11.8	12.4
22					4.1			G	U8.0s	U11.0s	12.8	12.6
23				U3.8s				G	U9.1s	11.4	12.6	12.6
24								U8.0s	11.0	11.8	12.8	12.6
25								G	9.0	11.4	12.8	12.0
26								G	11.2	12.0	13.8	13.4
27								S	11.0s	12.0	13.0	13.0
28	4.0s							G	9.0	11.6	12.6	12.6
29								G	G	9.2	12.8	13.0

Count	2	1	4	3	2	..	..	25	28	29	28	26
Median	..	..	..	..	..	..	..	G	9.7	11.4	12.6	12.6
Mean	..	..	..	..	..	..	..	6.6	9.9	11.3	12.4	12.4

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : February, 1960

TABLE 15 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2' N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
C	12.5	12.2	11.0	7.7	6.8	4.6						1
12.5	12.4	11.8	10.8	10.2	7.2			2.4	4.8	3.2	6.8	2
11.2	12.6	11.8	10.4	8.8	8.0				6.6			3
11.8	11.8	11.0	10.8	9.8	7.6							4
C	12.0	11.7	11.6	9.5	7.0							5
12.8	12.4	11.4	12.0	11.6	8.4							6
C	C	C	12.0	10.8	8.8							7
C	13.0	13.4	12.0	C	9.0							8
13.0	13.4	12.2	11.8	11.0	10.4							9
12.4	12.4	13.4	11.4	12.0	8.0							10
11.7	10.8	10.1	9.8	9.2	8.5							11
11.3	11.8	10.3	12.3	10.1	8.0		C	C	C	C		12
12.2	11.9	11.3	11.0	10.4	8.7							13
13.8	12.8	12.6	11.8	11.1s	10.8							14
12.4	12.1	11.8	9.8	10.4	S							15
12.0	12.0	12.0	9.4	10.0	8.0							16
12.0	12.2	12.4	11.0	10.0	8.0							17
8.0	10.4	11.4	10.8	9.0	8.0							18
12.0	13.4	12.0	12.0	9.0	8.4							19
12.2	11.2	11.0	10.0	8.8	7.4							20
12.2	10.8	11.6	11.2	11.0	10.7.6s							21
11.4	12.2	12.6	12.0	9.0	10.7.0s							22
12.2	11.4	11.4s	10.8	10.8	8.6					4.8	3.8	23
C	12.6	12.2	11.4	10.0	7.6	10.4.6s			C	C	C	24
12.8	12.8	12.8	11.2	10.0s	8.0							25
12.0	12.0	11.1	9.0	7.0	G					4.8	5.0s	26
12.0	12.6	12.0	11.0	11.0	7.0							27
12.6	13.0	12.8	11.0	9.2s	6.0s							28
13.0	12.6	12.8	11.0	8.4	9.8							29
24	28	28	29	28	28	2	..	1	2	3	3	Count
12.2	12.3	11.9	11.0	10.0	8.0	..	..	..	..	..	..	Median
12.1	12.2	11.9	11.0	9.8	8.0	..	..	..	..	..	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : February, 1960

TABLE 15 (Contd.)

Ionospheric Data

75.0 °E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								8.8	10.2	11.6	11.8	11.6
2								9.0	10.6	12.4	11.8	11.7
3		4.2	5.0				G	u7.4s	10.6	12.0	11.2	11.6
4							G	6.8	10.4	11.6	11.8	11.8
5			2.7					6.8	11.2	11.8	12.6	C
6							2.4	8.8	10.2	12.2	12.6	12.4
7	C	C	C	C	C	C	C	C	C	12.0	C	C
8								G	9.4	12.8	12.8	13.8
9								8.2	11.0	12.0	12.4	13.0
10							G	10.4	12.0	12.6	12.6	10.9
11								u9.5s	11.8	11.9	11.9	11.6
12							G	8.6	9.1	10.7	10.8	10.5
13							4.4	C	10.4	13.1	13.1	12.6
14							G	8.9	10.9	13.0	12.7	13.4
15								G	u10.7s	12.8	12.4	12.4
16		u7.0s					G	8.8	11.0	13.0	C	14.4
17			4.0					6.0	11.0	12.4	13.0	12.0
18								G	G	10.0	G	12.2
19	3.6	4.2					G	9.0	11.4	11.8	12.0	12.0
20							G	G	G	9.6	11.6	12.0
21							G	8.4	10.2	11.4	12.0	12.6
22								G	u9.2s	12.4	13.2	12.2
23			2.6				G	5.6	11.6	12.8	12.4	12.6
24							5.6	u9.6s	11.6	13.0	12.7	12.0
25							G	7.0	10.8	12.0	12.2	12.4
26							G	8.0s	12.0	12.4	13.0	13.0
27							G	10.0s	11.0	12.6	12.8	13.2
28		2.2	2.2				G	G	10.0	12.0	12.4	12.4
29							G	G	9.0	12.0	12.4	12.8

Count	1	4	5	..	..	..	18	27	28	29	27	27
Median	..	..	2.7	..	..	..	G	8.0	10.6	12.0	12.4	12.4
Mean	..	..	2.3	..	..	..	..	8.3	10.7	12.1	12.3	12.3

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : February, 1960

TABLE 15 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
12.7	12.6	11.4	8.8	7.0	5.6	3.6						1
12.6	11.8	10.8	9.4	8.0	6.6			4.0		3.9		2
12.2	B	10.6	G	8.4	4.0			3.6	8.0	3.2	4.0	3
11.8	11.2	11.2	10.6	8.5	4.4			C				4
12.6	12.0	11.8	11.0	8.4								5
11.0	12.8	12.4	11.8	9.0								6
C	C	12.2	12.0	9.2	7.4							7
14.0	13.6	12.0	C	C	7.0							8
13.0	13.4	12.0	12.0	12.0	U7.0s							9
12.6	12.0	12.6	12.0	8.8								10
11.0	10.7	10.3	9.8	8.6						5.6		11
11.0	10.8	12.7	10.2	8.1			C	C	C	C		12
12.1	12.6	11.3	10.8	9.6	3.8							13
13.4	11.4	11.6	11.8	9.8	S							14
12.3	12.4	10.8	U9.2s	9.3s	S							15
12.0	12.0	9.0	9.2	8.0	7.0							16
12.2	12.4	11.4	10.6	8.2	8.0							17
9.0	9.6	11.0	10.0	8.2	U6.0s							18
12.0	12.6	11.0	11.0	8.6	6.0							19
12.4	11.8	11.8	8.6	7.6	8.0							20
10.8	11.0	11.0	12.0	8.6								21
12.0	U12.0s	12.0	10.2	8.6	U5.0s							22
12.2	11.2	9.8	9.0	8.5	6.8				4.0	4.2		23
13.4	13.0	12.0	11.6	8.2	5.6							24
13.2	12.2	12.2	11.0	8.4	4.4							25
12.6	11.6	10.0	8.0	G	G							26
12.6	12.0	12.0	10.4	8.2	G				3.0	4.0	3.0	27
12.8	12.4	11.6	10.0	7.0s	G							28
13.0	12.0	12.0	9.3	10.4	U7.6s							29

28	27	29	28	28	21	1	..	2	3	5	2	Count
12.4	12.0	11.6	10.3	8.4	6.0	..	..	..	..	4.0	..	Median
12.2	12.0	11.4	10.4	8.6	6.1	..	..	..	..	4.2	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs  
Unit : Mc  
Month : February, 1960

TABLE 16  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10.2° N  
Longitude : 77.5°E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								2.6	3.2	3.8	4.0	4.4
2								G	3.2	3.7	4.0	4.3
3			2.2					2.5	3.2	3.8	4.0	4.3
4			1.6					G	3.2	3.8	4.0	4.2
5					1.5			G	3.2	3.8	4.0	4.0
6								2.5	3.2	3.8	4.0	4.1
7		C	C	C	C	C	C	C	C	3.6	3.8	C
8								G	3.2	3.7	3.9	4.0
9								2.5	3.1	3.6	4.0	4.1
10								2.5	3.2	3.7	4.0	4.0
11								2.4	3.1	3.5	3.8	4.1
12								2.4	3.1	3.5	3.7	4.0
13								C	3.1	3.6	3.8	4.0
14								2.4	3.1	3.5	3.7	4.0
15								G	3.0	3.4	3.6	3.9
16			1.4					2.5	3.2	3.6	C	C
17								G	3.0	3.6	3.8	4.1
18								G	G	3.6	3.7	4.0
19		2.0						2.5	3.1	3.5	3.8	4.0
20								G	G	3.6	3.8	C
21								2.4	3.1	3.5	3.8	4.2
22								G	3.2	3.6	3.8	4.0
23				1.5				G	3.1	3.6	3.8	4.0
24								2.5	3.1	3.6	3.9	4.0
25								G	3.1	3.4	3.8	4.0
26								G	3.1	3.6	3.9	4.0
27								2.5	3.2	3.7	4.0	4.0
28	1.8							G	3.1	3.6	3.8	4.1
29								G	G	3.6	3.8	4.0

Count	1	1	3	1	1	..	..	27	28	29	28	25
Median	..	..	..	..	..	..	..	G	3.1	3.6	3.8	4.0
Mean	..	..	..	..	..	..	..	2.5	3.1	3.6	3.9	4.1

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc

Month : February, 1960

TABLE 16 (Contd)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2' N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
C	4.2	4.0	3.7	3.2	3.4	2.2						1
4.3	4.3	4.1	3.8	3.4	2.6			1.6	1.7		2.0	2
4.4	4.3	4.1		3.4	2.7				2.8	2.2		3
4.3	4.5		3.8	3.3	2.8							4
C	4.2	4.0	3.9	3.3	2.8							5
4.2	4.1	4.0	3.8	3.4	2.7							6
C	C	C	3.6	3.3	2.6		C	C	C	C		7
C	4.0	3.9	3.6	C	2.6							8
4.1	4.0	3.9	3.6	3.2	2.6							9
4.1	4.0	4.1	3.7	3.3	2.7							10
4.0	4.0	3.8	3.6	3.2	2.7							11
4.1	4.0	3.8	4.6	3.4	2.6							12
4.2	4.1	3.9	3.5	3.2	2.6							13
4.0	3.9	3.7	3.5	3.1	2.6							14
4.0	4.0	3.6	3.4	3.1	2.6							15
4.0	4.0	3.8	3.6	3.2	2.6							16
4.1	4.2	3.8	3.6	3.2	2.6							17
4.0	4.0	3.9	3.6	3.2	2.6							18
4.1	4.0	3.8	3.6	3.2	2.6							19
4.0	3.9	3.8	3.5	3.2	2.6							20
4.1	4.0	3.9	3.7	3.2	2.7							21
4.0	4.0	3.8	3.6	3.2	2.6							22
4.4	4.0	3.8	3.5	3.2	2.7							23
C	4.0	4.0	3.6	3.1	2.6	1.6			C	2.0	1.7	24
4.0	4.0	3.8	3.6	3.2	2.7					C	C	25
4.0	4.1	3.8	3.6	3.2	G							26
4.0	4.0	4.0	3.6	3.2	2.6						1.9	27
4.0	4.1	3.9	3.6	3.2	2.6							28
4.0	4.0	3.8	3.7	4.0	2.9							29
24	28	27	28	28	29	2	..	1	2	2	3	Count
4.0	4.0	3.9	3.6	3.2	2.6	..	..	..	..	..	..	Median
4.1	4.1	3.9	3.7	3.3	2.7	..	..	..	..	..	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs  
Unit : Mc  
Month : February, 1960

TABLE 16 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								3.0	3.6	4.0	4.1	4.3
2								3.0	3.6	3.8	4.2	4.2
3		2.6	1.7				G	3.0	3.4	3.9	4.0	4.4
4							G	3.0	3.5	3.9	4.2	4.2
5								2.8	3.4	4.0	4.1	C
6							2.0	2.9	3.6	3.8	4.0	4.2
7	C	C	C	C	C	C	C	C	C	3.7	C	C
8								G	3.4	3.8	4.0	4.2
9								2.8	3.4	3.7	4.0	4.0
10								2.9	3.4	3.8	4.0	4.2
11							G	2.8	3.4	3.7	3.9	4.0
12								2.8	3.2	3.7	3.8	4.1
13								C	3.3	3.8	3.9	4.1
14								2.7	3.3	3.6	3.9	3.9
15								G	3.3	3.5	3.8	4.0
16		2.6					G	2.9	3.4	3.6	C	4.0
17								2.8	3.0	3.7	3.9	4.1
18								G	G	3.6	G	4.0
19	1.7	1.7					G	2.8	3.3	3.7	4.0	4.0
20							G	G	G	3.6	3.9	4.0
21							G	2.8	3.4	3.7	4.0	4.2
22								G	3.4	3.7	3.9	4.0
23							G	2.9	3.4	3.7	4.0	4.1
24							G	2.8	3.2	3.6	3.9	4.0
25												
26							G	2.8	3.4	3.7	4.0	4.0
27							G	2.9	3.4	3.8	4.0	4.1
28							G	G	3.4	3.7	4.0	4.0
29							G	G	3.3	3.6	3.8	3.9

Count	1	3	1	..	..	..	13	26	28	29	27	26
Median	..	..	..	..	..	..	G	2.8	3.4	3.7	4.0	4.0
Mean	..	..	..	..	..	..	..	2.9	3.4	3.7	4.0	4.1

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc

Month : February 1960

TABLE 16 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N.

Longitude : 77°5'E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
4.3	4.2	4.0	3.4	3.4	2.4	1.6						1
4.3	4.2	4.0	3.6	3.0	2.3			1.6		2.2		2
4.4	B	4.1	G	3.2	2.3			2.0	2.6	2.0	1.5	3
4.2	4.1	4.0	3.6	3.0	2.2			C				4
4.2	4.0	3.9	3.6	3.0								5
4.2	4.1	3.8	3.6	3.1								6
C	C	3.8	3.5	3.0	2.2							7
4.0	4.0	3.8	C	C	2.2							8
4.0	4.0	3.7	3.4	3.0	2.2							9
4.1	4.1	4.1	3.6	3.2								10
4.0	3.8	3.7	3.5	3.0								11
4.1	4.0	5.0	3.5	3.0						2.1		12
4.0	4.0	3.8	3.4	3.0			C	C	C	C		13
3.9	3.9	3.9	3.3	2.9	2.3							14
4.0	3.8	3.6	3.3	2.9	2.3							15
4.0	4.0	3.7	3.4	3.0	2.2							16
4.0	4.0	3.8	3.3	2.9								17
4.0	3.8	3.8	3.4	3.0	2.2							18
4.1	4.0	3.8	3.4	3.0	2.2							19
4.0	3.8	3.6	3.3	3.0	2.2							20
4.0	3.9	3.8	3.4	3.0								21
4.1	3.9	3.7	3.4	3.0	2.2							22
4.2	4.1	3.8	3.4	3.0					1.6	1.6		23
4.0	4.1	3.6	3.3	2.9								24
4.0	4.0	3.8	3.4	3.0	2.2							25
4.3	4.1	3.8	3.5	G	G							26
4.0	4.0	3.8	3.5	3.0	G					1.7		27
4.2	4.0	3.8	3.4	3.0	G							28
4.0	4.0	3.7	3.5	3.5	2.3							29
28	27	29	28	28	19	1	..	2	2	5	1	Count
4.0	4.0	3.8	3.4	3.0	2.2	..	..	..	..	2.0	..	Median
4.1	4.0	3.9	3.4	3.0	2.2	..	..	..	..	1.9	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : fmin  
Unit : Mc  
Month : February 1960

TABLE 17  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

Date	01	01	02	03	04	05	06	07	08	09	10	11
1	1.3	1.5	1.3	1.4	1.4	1.5	1.7	1.7	1.9	2.4	2.6	2.8
2	1.4	1.5	1.4	1.4	1.3	1.5	1.8	1.8	1.9	2.3	2.6	2.8
3	1.5	1.4	1.1	1.5	1.2	1.3	1.4	1.4	1.8	2.5	2.6	3.0
4	1.5	1.4	1.6	1.4	1.5	1.6	1.7	1.7	1.9	2.3	2.6	2.7
5	1.5	1.2	1.2	1.1	1.1	1.4	1.6	1.6	2.0	2.4	2.6	2.7
6	1.4	1.3	1.2	1.3	1.3	1.2	1.3	1.4	1.8	2.4	2.6	2.6
7	1.4	C	C	C	C	C	C	C	C	2.2	2.3	C
8	1.3	1.2	1.1	1.3	1.1	1.2	1.4	1.7	2.1	2.4	2.5	2.6
9	1.8	1.0	1.5	1.4	1.6	1.3	1.6	1.4	1.8	2.3	2.3	2.5
10	1.4	1.3	1.3	1.3	1.2	1.3	1.5	1.3	2.0	2.2	2.5	2.6
11	1.3	1.4	1.4	1.2	1.8	1.3	1.6	1.6	1.9	2.2	2.4	2.6
12	1.6	1.5	1.9	1.6	1.6	1.6	1.5	1.4	1.8	2.2	2.2	2.5
13	1.2	1.1	1.2	1.0	1.2	1.3	1.4	C	2.1	2.3	2.4	2.6
14	1.2	1.3	1.4	1.3	1.0	E	1.4	1.4	1.6	2.0	2.0	2.4
15	1.0	1.2	1.4	1.3	1.1	1.2	1.3	1.9	2.0	2.3	2.3	2.5
16	1.4	1.3	1.3	1.1	1.1	1.3	1.5	1.4	1.8	2.1	C	C
17	1.6	1.2	1.4	1.3	1.2	1.1	1.4	1.7	1.8	2.1	2.5	2.6
18	1.2	1.2	1.4	1.2	1.4	1.3	1.9	1.8	2.5	2.4	2.4	2.6
19	1.3	1.4	1.2	1.1	1.3	1.4	1.5	1.6	1.7	2.2	2.4	2.8
20	1.5	1.7	1.5	1.5	1.3	1.4	1.4	1.6	2.2	2.4	2.3	C
21	1.4	1.3	1.2	1.1	1.2	1.1	1.3	1.5	1.8	2.3	2.4	2.6
22	1.5	1.3	1.6	1.0	1.3	1.1	1.5	1.6	1.9	2.2	2.8	2.5
23	1.5	1.5	1.6	1.4	1.3	1.2	1.5	1.3	1.7	2.1	2.2	4.3
24	1.2	1.4	1.1	1.2	1.3	1.3	1.4	1.4	1.8	2.2	2.2	2.8
25	1.3	1.2	1.2	1.5	1.6	1.9	1.7	1.6	1.7	2.2	2.4	2.6
26	1.3	1.1	1.1	1.2	1.1	1.2	1.5	1.7	1.8	2.2	2.2	2.6
27	1.3	1.2	1.4	1.4	1.2	1.2	1.5	1.7	1.8	2.2	2.4	2.6
28	1.4	1.6	1.5	1.1	1.3	1.2	1.5	1.7	1.7	2.2	2.4	2.4
29	1.0	1.2	1.3	1.1	1.2	1.3	1.5	1.9	2.0	2.4	2.4	2.6

Count	29	28	28	28	28	28	28	27	28	29	28	26
Median	1.4	1.3	1.4	1.3	1.3	1.3	1.5	1.6	1.8	2.2	2.4	2.6
Mean	1.4	1.3	1.4	1.3	1.3	1.3	1.5	1.6	1.9	2.3	2.4	2.7

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : February 1960

TABLE 17 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
C	2.7	2.6	2.3	1.9	2.0	1.2	1.7	1.5	1.9	1.4	1.3	1
2.9	2.8	2.6	2.4	2.1	1.9	1.6	1.4	1.1	1.5	1.4	1.4	2
3.4	3.0	3.2	4.2	2.0	1.8	1.8	1.2	1.5	1.3	1.6	1.6	3
2.6	3.9	4.4	2.5	2.1	2.2	1.6	1.2	1.6	1.4	1.5	1.6	4
C	2.7	2.6	2.6	2.3	2.2	1.7	1.4	1.3	1.6	1.6	1.7	5
2.8	2.9	2.7	2.3	2.3	2.2	1.7	1.2	1.3	1.5	1.3	1.4	6
C	C	C	2.3	1.8	1.8	1.6	1.1	1.2	1.3	1.2	1.3	7
C	2.6	2.6	2.2	C	1.8	1.6	1.1	1.2	1.3	1.3	1.4	8
2.6	2.4	2.4	2.2	2.1	1.6	1.5	1.2	1.2	1.2	1.3	1.8	9
2.9	2.6	2.5	2.4	2.2	2.2	1.8	1.3	1.3	1.3	1.0	1.3	10
2.7	2.7	2.5	2.5	2.2	2.3	1.9	1.2	1.0	1.1	1.3	1.9	11
2.6	2.6	2.2	2.1	2.0	2.2	1.6	C	C	C	C	1.4	12
2.6	2.7	2.6	2.6	2.3	2.2	1.6	1.1	1.1	1.3	1.4	1.2	13
2.5	2.5	2.3	2.2	1.7	1.6	1.6	1.2	1.3	1.2	1.4	1.2	14
2.5	2.4	2.4	2.2	1.9	1.6	1.6	1.2	1.1	1.3	1.3	1.2	15
2.6	2.6	2.5	2.5	2.4	2.2	1.6	1.3	1.5	1.3	1.7	1.7	16
2.8	2.8	2.3	2.4	1.9	1.8	1.6	1.5	1.4	1.5	1.4	1.4	17
2.4	2.6	2.5	2.6	2.2	1.9	1.8	1.4	1.4	1.4	1.6	1.3	18
2.8	2.8	2.6	2.4	2.0	1.7	1.6	1.3	1.2	1.6	1.4	1.5	19
2.6	2.6	2.4	2.2	2.0	2.0	1.6	1.1	1.6	1.7	1.5	1.6	20
2.8	2.6	2.6	2.6	2.2	2.2	1.8	1.3	1.4	1.3	1.4	1.2	21
2.8	2.5	2.6	2.2	2.0	1.8	1.6	1.5	1.4	1.4	1.3	1.4	22
3.4	2.7	2.4	2.4	2.0	2.2	1.8	1.3	1.4	1.4	1.2	1.5	23
C	2.8	2.3	2.2	1.8	1.5	1.1	S	1.4	C	C	C	24
2.6	2.6	2.4	2.1	2.0	2.0	1.6	1.4	S	1.4	1.4	1.6	25
2.6	2.8	2.4	2.4	2.0	2.2	1.7	1.3	1.5	1.5	1.5	1.2	26
2.7	2.6	2.6	2.4	2.0	1.7	1.6	1.4	1.3	1.5	1.8	1.8	27
2.5	2.4	2.4	2.2	2.0	1.5	1.7	1.4	1.4	1.3	1.3	1.2	28
2.6	2.6	2.4	2.4	2.3	1.9	1.8	1.3	1.1	1.3	1.3	1.3	29
24	28	28	29	28	29	29	27	27	27	27	28	Count
2.6	2.6	2.5	2.4	2.0	1.9	1.6	1.3	1.3	1.4	1.4	1.4	Median
2.7	2.7	2.6	2.4	2.1	1.9	1.6	1.3	1.3	1.4	1.4	1.4	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin  
Unit : Mc  
Month : February 1960

TABLE 17 (Contd.)  
Ionospheric Data  
75°0' E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	1.5	1.3	1.3	1.3	1.2	1.4	2.0	1.8	2.2	2.5	2.7	2.8
2	1.3	1.4	1.3	1.3	1.4	1.6	2.1	1.8	2.2	2.5	2.6	2.8
3	1.6	1.2	1.3	1.4	1.4	1.4	1.6	1.6	2.0	2.5	2.8	3.4
4	1.6	1.5	1.7	1.5	1.6	1.4	1.8	1.7	2.2	2.3	2.6	2.8
5	1.3	1.3	1.3	1.4	1.4	1.4	2.1	1.7	2.3	2.4	2.6	C
6	1.6	1.4	1.0	1.3	1.2	1.2	1.3	1.4	2.4	2.4	2.6	2.6
7	C	C	C	C	C	C	C	C	C	C	C	C
8	1.2	1.1	1.1	1.3	1.1	1.3	2.0	1.8	2.1	2.4	2.6	2.8
9	1.2	1.4	1.2	1.5	1.6	1.4	2.2	1.6	2.0	2.1	2.4	2.6
10	1.2	1.4	1.3	1.2	1.3	1.3	1.7	1.9	2.3	2.7	2.4	2.9
11	1.2	1.3	1.4	1.4	1.3	1.2	2.0	1.7	2.0	2.3	2.5	2.6
12	1.6	1.6	1.9	1.6	1.3	1.4	1.6	1.6	1.9	2.1	2.4	2.7
13	1.3	1.3	1.2	1.3	1.4	1.2	2.0	C	2.1	2.5	2.5	2.7
14	1.3	1.2	1.2	1.2	E	E	1.5	1.4	1.8	2.1	2.3	2.3
15	1.2	1.3	1.2	1.2	1.2	1.3	1.9	1.8	2.2	2.4	2.3	2.5
16	1.1	1.5	1.1	1.1	1.3	1.4	1.4	1.5	2.0	2.3	C	2.5
17	1.5	1.1	1.5	1.1	1.3	E	2.0	1.7	1.8	2.2	2.6	3.0
18	1.3	1.1	1.1	E	1.3	1.6	2.2	2.2	2.5	2.3	2.6	2.8
19	1.1	1.3	1.3	1.2	1.5	1.3	1.5	1.6	2.0	2.2	2.8	2.8
20	1.7	1.7	1.5	1.5	1.2	1.5	1.7	1.2	2.3	2.3	2.4	2.6
21	1.2	1.2	1.1	1.3	1.2	1.0	1.5	1.6	2.2	2.1	2.5	2.8
22	1.5	1.3	1.2	1.2	1.1	1.3	2.0	1.7	2.1	2.2	2.6	2.8
23	1.2	1.5	1.5	1.5	1.3	1.2	1.7	1.8	2.2	2.2	2.2	4.6
24	1.2	1.1	1.2	1.1	1.2	1.2	1.6	1.7	2.0	2.3	2.5	2.6
25	1.4	1.2	1.2	1.4	1.6	1.5	1.7	1.6	1.9	2.1	2.6	2.6
26	1.1	1.1	1.0	1.2	1.2	1.4	1.6	1.6	1.9	2.2	2.4	2.6
27	1.1	1.4	1.5	1.1	1.2	1.2	1.8	1.8	2.2	2.2	2.6	2.6
28	1.5	1.5	1.2	E	1.2	1.4	1.5	1.6	1.9	2.1	2.2	2.6
29	1.2	1.1	1.2	1.2	1.2	1.2	1.9	1.8	2.2	2.2	2.6	2.6

Count	28	28	28	28	28	28	28	27	28	29	27	27
Median	1.3	1.3	1.2	1.3	1.3	1.3	1.8	1.7	2.1	2.3	2.6	2.7
Mean	1.3	1.3	1.3	1.3	1.3	1.3	1.8	1.7	2.1	2.3	2.5	2.8

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : February 1960

TABLE 17 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.7	2.6	2.5	2.1	2.2	1.8	1.2	1.5	1.7	1.6	1.6	1.4	1
3.0	2.6	2.6	2.3	2.2	1.8	1.3	1.3	1.1	1.6	1.4	1.7	2
3.2	6.2	2.8	2.5	2.0	1.8	1.2	1.4	1.1	2.0	1.9	1.6	3
2.8	2.6	2.6	2.2	2.2	1.8	1.3	1.4	C	1.6	1.5	1.6	4
2.7	2.8	2.6	2.5	2.3	2.3	1.3	1.6	1.9	1.5	1.8	1.8	5
3.1	2.7	2.6	2.5	2.2	2.4	1.4	1.2	1.2	1.3	1.3	1.5	6
C	C	2.4	2.0	2.0	1.7	1.2	1.2	1.3	1.3	1.3	1.3	7
2.6	2.5	2.4	C	C	1.6	1.2	1.0	1.2	1.3	1.5	1.4	8
2.4	2.4	2.2	2.2	1.6	1.2	1.3	1.3	1.3	1.3	1.7	1.7	9
2.3	2.5	2.3	2.3	2.2	2.3	1.4	1.4	1.3	1.3	1.3	1.3	10
2.5	2.6	2.6	2.3	2.4	2.2	1.2	1.1	E	1.4	1.5	1.8	11
2.5	2.3	2.3	2.2	2.3	2.3	1.1	C	C	C	C	1.2	12
2.8	2.8	2.8	2.2	2.3	2.3	1.3	1.5	1.4	1.2	1.2	1.1	13
2.5	2.4	2.4	2.1	1.6	1.6	1.1	1.0	1.1	1.4	1.2	1.3	14
2.5	2.4	2.3	2.1	1.8	1.9	1.2	1.1	1.2	1.4	1.2	1.3	15
2.8	2.6	2.4	2.3	2.2	1.9	1.3	1.4	1.4	1.5	1.7	1.5	16
2.8	2.7	2.4	2.4	2.0	2.2	1.2	1.4	1.7	1.5	1.7	1.2	17
3.0	2.8	2.6	2.3	2.2	1.9	1.5	1.4	1.4	1.4	1.5	1.3	18
2.6	2.6	2.7	2.2	2.0	1.4	1.3	1.3	1.4	1.4	1.4	1.4	19
2.6	2.6	2.3	2.2	2.0	1.7	1.3	1.3	1.5	1.5	1.5	1.7	20
2.5	2.6	2.5	2.4	2.4	2.3	1.4	1.3	1.7	1.5	1.4	1.3	21
2.7	2.5	2.4	2.2	1.9	1.7	1.3	1.6	1.4	1.3	1.4	1.6	22
3.0	2.7	2.8	2.3	1.9	1.8	1.3	1.5	1.4	1.2	1.3	1.2	23
2.4	2.4	2.3	1.9	1.6	1.3	1.0	1.3	1.2	1.3	1.6	1.3	24
2.6	2.4	2.3	2.0	2.1	1.7	1.4	S	1.5	1.4	2.0	1.5	25
3.2	2.6	2.6	2.2	2.2	1.9	1.4	S	1.3	1.4	1.4	1.1	26
2.8	2.6	2.4	2.2	2.0	1.4	1.3	1.2	1.3	1.8	1.4	1.4	27
2.6	2.4	2.4	2.2	1.8	1.5	1.2	S	1.4	1.3	1.2	1.3	28
2.6	2.6	2.5	2.2	2.1	1.8	1.4	1.3	1.1	1.4	1.3	1.6	29
28	28	29	28	28	29	29	25	27	28	28	29	Count
2.6	2.6	2.4	2.2	2.1	1.8	1.3	1.3	1.3	1.4	1.4	1.4	Median
2.7	2.7	2.5	2.2	2.1	1.8	1.3	1.3	1.4	1.4	1.5	1.4	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km

Month : February 1960

TABLE 18  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26								L	L	L	285L	L
27								L	L	L	280L	280
28								L	L	L	L	280
29								L	L	L	L	L
Count								..	..	..	2	2
Median								..	..	..	..	..
Mean								..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km

Month : February 1960

TABLE 18 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
C	L	L	L	L	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
C	L	L	L	L	L							5
												6
L	L	L	L	L	L							7
C	L	L	L	L	L							8
L	L	L	L	L	L							9
L	L	L	L	L	L							10
												11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
												16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
												21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
C	L	L	L	L	L							24
L	L	L	L	L	L							25
												26
L <sub>H</sub>	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
												Count
												Median
												Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km

Month : February 1960

TABLE 18 (Contd.)

Ionospheric Data

75° 0'E Mean Time

Latitude : 10° 2'N

Longitude : 77° 5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	L
2								L	L	L	L	L
3							L	L	L	L	L	L
4							L	L	L	L	L	C
5												
6							C	L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10												
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15												
16								L	L	L	C	L
17								L	L	L	L	L
18								L	L	L	L	L
19							L	L	L	L	L	L
20												
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25										U280L		U310L 290
26								L	L	L	L	L
27								L	L	L	L	L
28							L	L	L	L	260	280
29												L
Count							..	..	..	1	1	3
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km

Month : February 1960

TABLE 18 (Contd.,

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L								5
L	L	L	L	L								6
C	C	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L								11
L	L	L	L	L								12
L	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	L	L	L								16
L	L	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L								26
L	L	L	L	L								27
L	L	L	L	L								28
L	L	L	L	L								29
												Count
												Median
												Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : h'F

Unit : Km

Month : February 1960

TABLE 19  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	320	280	230	205	200	215	260	250	230	225	205	195
2	260	250	240	230	215	215	245	245	230	225	200	200
3	230	265	295	255	225	225	240	255	235	225	210	200
4	255	245	240	225	210	225	260	255	240	225	220	215
5	235	250	250	280	290	245	230	250	235	230	220	210
6	260	260	260	230	220	230	250	260	240	230	215	215
7	250	C	C	C	C	C	C	C	C	225	215	C
8	U260F	240	220F	235	U230F	225	240	250	230	220	215	205
9	255F	240	225	230	220	205	280	260	230	225	215	210
10	220	220	205	220	U225F	230	U270F	250	230	220	205	210H
11	255	225	220	220	215	200	230	245	230	220	215	200
12	240	235	225	235	280	240	240	245	230	220	210	200
13	225	225	220	235	220	225	270	C	240	220	205	210
14	235	230	210	230	245	U290F	320	260	250	240	240	220
15	225	220	225	245	265	265	245	255	240	220	210	200
16	240	225	220	220	210	225	260	240	230	220	C	C
17	220	220	220	220	220	240	260	240	230	220	210	200
18	240	240	240	220	260	220	220	245	230	220	220	220
19	230	260	250	220	210	200	240	240	220	220	210	200
20	220	220	225	225	260	240	220	240	230	210	210	C
21	240	235	230	220	220	220	260	250	235	220	215	195
22	220	215	220	235	240	215	240	245	225	215	205	205H
23	235	220	230	245	255	235	240	255	230	220	210H	U210B
24	230	250	245	220	220	225	255	250	230	220	210	200
25	240	220	225	220	220	250	280	240	225	215	200	195
26	220	210	210	230	240	230	270	240	220	210	200	190
27	215	210	210	220	220	230	270	240	230	210	205	200
28	220	220	240	260	240	225	250	240	225	215	205	200
29	225	210	210	225	220	220	260	245	220	205	200	190

Count	29	28	28	28	28	28	28	27	28	29	28	26
Median	235	230	225	230	220	225	250	245	230	220	210	200
Mean	240	235	230	230	230	230	255	250	230	220	210	205

Sweep 1.0 Mc, to 25.0 Mc, in 27 seconds.

Characteristic : h'F

Unit : Km

Month : February 1960

TABLE 19 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
C	200	205	215	230	260	290	370	F	280	260	260	1
205	205	210	220	230	250	300	390	F	360	250	255	2
200H	210	215	230	240	260	300	400	F	F	280	255	3
200	210	U225B	225	230	265	300	420	385F	340	260	240	4
C	205	210	220	235	260	295	340	330	315	275	245	5
205H	205	220	220	240	260	310	400	U360F	300F	255	265	6
C	C	C	215H	230	260	300	U440F	U510F	F	U300F	U250F	7
C	205H	205	220	C	265	300	380	F	U400F	U270F	265F	8
200	210H	215	210	235	260	290	425	F	F	U280F	U255F	9
205	200	205H	225	230	250	280	U380F	U420F	U400F	U300F	265F	10
210	205	210	215	220	250	285	390	F	U370F	U305F	275	11
195	205	210	A	230	240	290	C	C	C	C	280	12
210	200	200	220	235	255	290	F	F	U350F	315	260	13
205	205	210	215	245	260	300	370	U375F	330	270	240	14
210	205	200H	210	235	260	285	U445F	F	F	F	240	15
210	200	205	205	210	250	280	370	300	U320F	300F	225	16
200	200	200	210	230	250	290	400	420	U310F	260	240	17
210	215	220	220	230	240	265	300	285	260	240	240	18
200	200	200	200	200	240	270	360	360	300	260F	240	19
200	210	210	220	220	245	280	360	360F	300	240	230	20
195H	200	200	210	230	255	275	325	355	295	275	240	21
205	205	205	205	230	260	285	360	365	F	270	250	22
200	210	205	215	235	260	280	360	F	F	U310F	240	23
C	200	195H	215	240	255	285	420	F	C	C	C	24
190	190	190	190	230	250	285	420	420F	280F	300	240	25
180	200	195	190	220	240	280	400	420F	360F	280F	230	26
200	190	190	210	220	245	280	380	320	240	220	220	27
195	190	180H	220	230	250	280	400	360F	240F	270F	260	28
180	185	180H	200	U260A	255	295	395	F	F	F	220	29
24	28	28	28	28	29	29	27	17	20	25	28	Count
200	205	205	215	230	255	285	390	360	310	270	240	Median
200	200	205	215	230	255	290	385	375	320	275	245	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F  
Unit : Km  
Month : February 1960

TABLE 19 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	320	255	220	200	210	225	270	240	225	210	200	200
2	255	250	240	220	220	220	255	240	230	205	200 <sub>H</sub>	200
3	245	285	275	255	220	225	270	245	225	215	205	195 <sub>H</sub>
4	255	240	240	225	215	230	270	245	235	220	205	210
5	240	250	260	290	265	230	260	245	230	225	210	C
6	255	265	255	220	220	240	280	250	240	230	210	205
7	C	C	C	C	C	C	C	C	C	220	C	C
8	240 <sub>F</sub>	230	230	230 <sub>F</sub>	225	220	260	240	230	220	210	205 <sub>H</sub>
9	245	235	225	220	220	230	275	245	230	220	215	200
10	225 <sub>F</sub>	215	215	220	235	240 <sub>F</sub>	270	245	225	215 <sub>H</sub>	205	205
11	230	225	215	220	210	210	260	240	225	220	210	200
12	225 <sub>F</sub>	230	225	265	260	220	260	240	225	215	205	200
13	220	220	215	215	220	240	270	C	235	220	215	215
14	230	220	210	230	280	295 <sub>F</sub>	280	260	240	230	225	215
15	220	220	235	260	265	245	265	245	230	215	220	205
16	230	240	220	220	220	220	260	240	220	215	C	205
17	220	220	220	215	220	240	260	240	220	215	200	200
18	240	240	220	240	225	200	260	240	220	220	220	210
19	240	260	240	220	200	205	260	235	220	210	205	200
20	220	240	220	245	280	205	240	240	220	210	200	200
21	235	235	225	220	220	230	265	245	230	225	205 <sub>H</sub>	200 <sub>H</sub>
22	220	215	230	235	225	220	260	240	220	210	205	205
23	220	220	235	260	250	220	265	240	225	215 <sub>H</sub>	200	B
24	235	250	225	220	220	225	265	245	220	220 <sub>H</sub>	205	200
25	225	220	220	225	220	250	255	230	220	210	200	190
26	215	210	220	235	230	240	255	230	220	205	200	190
27	210	210	220	225	225	240	255	230	220	210	200	190 <sub>H</sub>
28	220	230	260	260	245	220	260	235	220	215	200	200
29	220	210	215	220	220	F	240	230	215	200	195	190

Count	28	28	28	28	28	27	28	27	28	29	27	26
Median	230	230	225	225	220	225	260	240	225	215	205	200
Mean	235	235	230	230	230	230	260	240	225	215	205	200

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km

Month : February 1960

TABLE 19 (Contd.)

Ionospheric Data

75° 0'E Mean Time

Latitude : 10° 2'N

Longitude : 77° 5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
205H	215	220	225	245	270	330	F	F	270	260	260	1
210	205	210	230	240	270	340	F	F	295	260	235	2
220	B	225	230	245	280	370	U360F	275	310	255	255	3
205	205	205H	230	245	280	360	440	C	305	240	245	4
200	215	220	220	250	275	325	340	340	280	260	245	5
210	210	210	220	250	280	360	U380F	U320F	260F	260	270	6
C	C	210H	230	240	270	360	F	F	F	U320F	U265F	7
200H	205H	220	C	C	280	350	U390F	F	F	U270F	270F	8
210	210H	215	220	245	270	340	F	F	F	F	U235F	9
200	205H	230H	230	245	260	U330F	U400F	U410F	F	U260F	260	10
200	205	215	220	235	270	340	U430F	F	U325F	U305F	245	11
200	205	A	220	235	260	360	C	C	C	C	255	12
205	210	215	230	240	265	360	U420F	F	U340F	270	235	13
205	205	220	240	260	280	340	375	345	300	240	225	14
205	205H	200	220	245	270	340	F	F	F	U305F	220	15
200	200	205	220	240	260	330	360	U300F	350F	240F	230	16
195	200	210	215	240	260	330	410	U390F	280	245	240	17
210	215	220	220	235	260	280	300	265	250	230	220	18
200	205	200	205	235	260	310	360	320	300	240	240	19
200	205	215	220	230	260	310	360F	320F	270	240	240	20
205H	205	210	220	240	260	300	355	325	280	255	225	21
200H	205	205	220	235	270	320	380	340	295	260	240	22
210	205	215	220H	245	270	320	F	U400F	U350F	260	225	23
200	200H	195	230	240	270	340	F	F	F	U275F	240	24
190	195	190	210	240	260	355	F	320	F	260	220	25
205	200	195	205	230	260	330	F	360F	270F	250F	220	26
190	195	195	220	240	260	320	360	270	230	220	220	27
200	180H	190	220	235	260	330	400F	280	260	240	220	28
185	180	180H	225	255	270	345	F	F	U315F	230F	220	29
28	27	28	28	28	29	29	18	17	21	27	29	Count
200	205	210	220	240	270	340	380	320	295	260	240	Median
200	205	210	220	240	270	335	380	330	290	255	240	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km

Month : February 1960

TABLE 20  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								110	A	A	A	A
2								115	100	A	A	A
3								105	A	A	A	A
4								115	A	A	A	A
5								115	A	A	A	A
6								115	A	A	A	A
7								C	C	A	105	A
8								120	A	105	A	A
9								110	A	A	A	A
10								A	105	A	A	A
11								105	100	100	100	100
12								115	100	A	A	A
13								C	A	A	A	A
14								A	A	A	A	A
15								120	110	A	A	A
16								120	A	A	C	C
17								120	105	A	A	A
18								120	A	A	A	A
19								A	A	A	A	A
20								120	105	A	A	C
21								115	A	A	A	A
22								120	110	A	A	A
23								110	115	110	A	B
24								110	105	A	A	A
25								115	110	A	A	A
26								110	A	A	A	A
27								115	A	A	A	A
28								110	105	A	A	A
29								115	110	A	A	A

Count	24	14	3	2	1
Median	115	105	..	..	..
Mean	115	105	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

TABLE 20 (Contd.)

Latitude : 10°2'N

Unit : Km

Ionospheric Data

Longitude : 77°5'E

Month : February 1960

75°0'E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
C	A	A	A	A	A							1
A	A	A	A	A	115							2
A	A	A	B	A	A							3
A	B	B	A	A	A							4
C	A	A	A	A	A							5
A	A	A	A	A	A							6
C	C	C	A	A	A							7
C	A	A	105	C	A							8
A	A	A	A	A	A							9
A	A	A	A	A	A							10
A	A	A	A	A	A							11
A	A	A	A	A	A							12
A	A	A	A	A	A							13
A	A	A	A	A	A							14
A	A	A	A	A	A							15
110	A	A	A	110	120							16
A	A	A	A	A	110							17
A	A	A	A	110	110							18
A	A	A	A	A	A							19
A	A	A	A	110	120							20
A	A	A	A	A	120							21
A	A	A	A	A	A							22
115	A	A	A	A	F							23
C	A	A	A	A	115							24
A	A	A	A	A	A							25
A	A	A	A	A	120							26
A	A	A	A	A	110							27
A	A	A	A	A	105							28
A	A	A	110	110	A							29

2	..	..	2	4	10	Count
..	..	..	..	..	115	Median
..	..	..	..	..	115	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km

Month : February 1960

TABLE 20 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude 10°2'N

Longitude 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								A	A	A	A	A
2							125	A	A	A	A	A
3							130	115	A	A	A	A
4								110	A	A	A	C
5												
6							C	A	A	105	A	A
7								C	A	A	C	A
8								115	A	A	105	A
9								105	A	A	A	A
10							130	A	A	A	A	A
11								100	100	100	100	A
12							135	105	100	A	A	A
13								C	A	A	A	A
14							130	A	A	A	A	A
15								115	A	A	A	A
16							120	110	A	A	C	A
17								105	A	A	A	A
18								120	110	A	100	A
19							120	A	A	A	A	A
20							130	120	100	A	A	A
21							135	A	A	A	A	A
22								115	A	A	A	A
23							135	115	110	A	A	B
24							135	A	A	A	A	A
25							120	110	A	A	A	A
26							120	110	A	A	A	A
27							120	A	A	A	A	A
28							120	110	A	A	A	A
29							130	110	A	A	A	A

Count	16	18	6	2	3	..
Median	130	110	100	..	..	..
Mean	125	110	105	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E  
Unit : Km  
Month : February 1960

TABLE 20 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	A	A	A								1
A	A	A	A	110	120							2
A	B	A	105	A	120							3
A	A	A	A	A	120							4
A	A	A	A	110								5
A	A	A	A	A								6
C	C	A	105	A								7
A	A	A	C	C								8
A	A	A	A	A								9
A	A	A	A	105								10
A	A	A	A	A								11
A	A	A	A	A								12
A	A	A	115	A								13
A	A	A	A	A	A							14
A	A	A	A	A	A							15
110	A	A	110	110	130							16
A	A	A	A	A								17
A	A	A	A	110	120							18
A	A	A	A	A	110							19
A	A	A	105	110	120							20
A	A	A	A	A								21
A	A	A	A	A								22
110	A	110	A	A	F							23
A	A	A	A	110	115							24
A	A	A	A	120								25
A	A	A	105	120	130							26
A	A	A	A	A	135							27
A	A	A	A	A	120							28
A	A	A	A	115	A							29
												Count
2	..	1	6	10	11							Median
..	..	..	105	110	120							Mean
..	..	..	110	110	120							

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : h'Es  
Unit : Km  
Month : February 1960

TABLE 21  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								100	100	100	100	100
2								G	100	100	100	100
3			105					100	100	100	100	100
4	105		110					G	100	100	100	100
5					105			G	100	100	100	100
6								100	100	100	100	100
7		C	C	C	C	C	C	C	C	100	100	C
8				160				G	100	100	100	100
9								100	100	100	100	100
10								105	100	100	100	100
11								100	100	100	100	100
12								160	100	100	100	100
13								C	100	100	100	100
14								100	100	100	100	100
15				105				G	100	100	100	100
16			105					100	100	100	C	C
17								G	100	100	100	100
18								G	G	100	100	100
19		100	100					100	100	100	100	100
20								G	G	100	100	C
21								100	100	100	100	100
22					125			G	100	100	100	100
23				105				G	100	100	100	100
24								100	100	100	100	100
25								G	100	100	100	100
26								G	100	100	100	100
27								100	100	100	100	100
28	105							G	100	100	100	100
29								G	G	100	100	100

Count	2	1	4	3	2	..	..	13	25	29	28	26
Median	..	..	..	..	..	..	..	100	100	100	100	100
Mean	..	..	..	..	..	..	..	105	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : February 1960

TABLE 21 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2° N

Longitude : 77.5° E

12	13	14	15	16	17	18	19	20	21	22	23	Date
C	100	100	100	100	100	100						1
100	100	100	100	100	100			115	110		105	2
100	100	100	100	100	100				115	100		3
100	100	100	100	100	100							4
C	100	100	100	100	100							5
100	100	100	100	100	105							6
C	C	C	100	100	105							7
C	100	100	100	C	110							8
100	100	100	100	100	100							9
100	100	100	100	100	105							10
100	100	100	100	100	100							11
100	100	100	100	100	100		C	C	C	C		12
100	100	100	100	100	100							13
100	100	100	100	100	100							14
100	100	100	100	100	100							15
100	100	100	10	100	100							16
100	100	100	100	100	100							17
100	100	100	100	100	100							18
100	100	100	100	100	100							19
100	100	100	100	100	100							20
100	100	100	100	100	100							21
100	100	100	100	100	100							22
100	100	100	100	100	100							23
C	100	100	100	100	100					115	110	24
100	100	100	100	100	100	100			C	C	C	25
100	100	100	100	100	100							26
100	100	100	100	100	G							27
100	100	100	100	100	100					140	105	28
100	100	100	100	100	100							29

24	28	28	29	28	28	2	..	1	2	3	3	Count
100	100	100	100	100	100	..	..	..	..	..	..	Median
100	100	100	100	100	100	..	..	..	..	..	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es  
Unit : Km  
Month : February 1960

TABLE 21 (Contd.)  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2° N  
Longitude : 77.5° E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								100	100	100	100	100
2								100	100	100	100	100
3		105	105				G	100	100	100	100	100
4							G	100	100	100	100	100
5			115					100	100	100	100	C
6							100	100	100	100	100	C
7	C	C	C	C	C	C	C	C	C	C	C	C
8								100	100	100	100	100
9							G	100	100	100	100	100
10								100	100	100	100	100
11							G	100	100	100	100	100
12							135	C	100	100	100	100
13							G	100	100	100	100	100
14								G	100	100	100	100
15												
16		100					G	100	100	100	C	100
17			100					120	100	100	100	100
18								G	G	100	G	100
19	100	100					G	100	100	100	100	100
20												
21							G	100	100	100	100	100
22								G	100	100	100	100
23			110				G	100	100	100	100	100
24							120	100	100	100	100	100
25							G	100	100	100	100	100
26							G	100	100	100	100	95
27							G	100	100	100	100	100
28		100	100				G	G	100	100	100	100
29												

Count	1	4	5	..	..	..	3	20	26	29	26	27
Median	..	..	105	..	..	..	..	100	100	100	100	100
Mean	..	..	105	..	..	..	..	100	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : February 1960

TABLE 21 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
100	100	100	100	100	100	100						1
100	100	100	100	100	105			110		110		2
100	B	100	G	100	110			110	105	100	110	3
100	100	100	100	100	110			C				4
100	100	100	100	100								5
100	100	100	100	100								6
C	C	100	100	100	105							7
100	100	100	C	C	115							8
100	100	100	100	100	100							9
100	100	100	100	100								10
100	100	100	100	100						105		11
100	100	100	100	100			C	C	C	C		12
100	100	100	100	100	115							13
100	100	100	100	100	100							14
100	100	100	100	100	100							15
100	100	100	100	100	110							16
100	100	100	100	100	100							17
100	100	100	100	100	100							18
100	100	100	100	100	100							19
100	100	100	100	100	100							20
100	100	100	100	100								21
100	100	100	100	100	110							22
100	100	100	100	100	100				115	120		23
100	100	100	100	100	120							24
100	100	100	100	100	120							25
100	100	100	100	G	G							26
100	100	100	100	100	G				120	120	120	27
100	100	100	100	100	G							28
100	100	100	100	105	100							29
28	27	29	27	27	20	1	..	2	3	5	2	Count
100	100	100	100	100	100	..	..	..	..	110	..	Median
100	100	100	100	100	105	..	..	..	..	110	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M 3000) F2

Unit : .....

Month : February 1960

TABLE 22  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2° N

Longitude : 77.5° E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	F	F	F	F	3.20	3.30	2.60	2.80	2.45	2.40	2.25	2.30
2	2.65	2.80	2.90	3.05	3.10s	3.25	2.60	3.10	2.80	2.35	2.30	2.15
3	2.85	2.70	2.70	2.80	2.95	3.00	3.05	2.80	2.45	2.20	2.20	2.20
4	2.75	2.85	2.90	F	3.10	3.20	2.60	3.00	2.80	2.50	2.00H	2.40
5	U2.65F	U2.60F	2.85	F	2.60	2.95	3.20	2.95	2.80	2.50	2.20	2.15
6	U2.80s	2.75	2.75	2.90	3.10	3.15	3.05	2.80	2.60	2.40	2.40	2.25
7	2.55	C	C	C	C	C	C	C	C	2.40	2.30	C
8	F	F	F	U3.00s	3.00F	3.20	3.10	3.00	2.80	2.65	2.45	2.20
9	U2.70F	U2.70F	U2.80F	3.00	3.40	3.20	2.75	3.00	2.75	2.50	2.35	2.20
10	U2.90F	U3.15F	F	F	F	U3.20F	F	2.80F	2.60	2.40	2.45	2.40
11	F	U3.00F	F	3.05	3.20	F	3.05	2.90	2.55	2.45	2.35	2.40
12	2.85	F	3.05	U3.05s	Fs	3.00	F	U2.80s	2.80	2.55	2.30	2.25
13	F	Fs	Fs	U3.25s	U3.30s	3.20	2.75	C	2.75	2.45	2.35	2.35
14	3.00	3.15	3.30	U3.35s	U3.15s	F	U2.65F	2.80	2.60	2.55	2.30	2.30
15	3.10	U3.20s	U3.25s	U3.00s	2.95	2.90	2.95	3.15	2.85	2.70	2.35	2.25
16	F	3.15	3.30	3.35	3.40	3.30	2.80	U3.00s	2.80	2.60	C	C
17	3.10	F	U3.25Fs	U3.30s	3.45	3.40	2.90	3.10	2.95	2.65	2.30	2.50
18	2.95	2.95	3.05	3.20	3.00	3.20	3.20	3.15	3.20	3.00	2.80	2.65
19	3.05	3.00	3.00	3.15	3.40	3.40H	3.10	3.05	2.75	2.65	2.55	2.50
20	3.10	3.10	3.25	U3.25s	2.95	U3.05s	3.30	3.20	3.25	3.05	2.70	C
21	2.90	3.00	3.10	3.35	3.40	3.30	3.20s	3.00	2.65	2.60	2.50	2.45
22	3.05s	3.15	3.20	3.20	3.20	3.40	3.25	3.15	U3.05s	2.80	2.40	2.30
23	2.95	3.15	3.20	3.15	3.10	3.30	3.15	3.05	2.80	2.45	2.40	2.40
24	2.90	2.95	3.10	3.20	3.35	3.50	3.15	3.00	2.65	2.50	2.50	2.55
25	F	U3.10s	3.00	F	3.40	3.40	2.85	3.20	2.95	2.40	2.45	2.50
26	F	F	F	3.10s	3.10F	3.40	2.85	3.15	2.80	2.35	2.45	2.45
27	3.10s	3.30	F	F	F	3.35	3.40	2.90	2.60s	2.55	2.40	2.40
28	U3.10s	U3.15s	3.10	U3.10s	3.15s	3.25	3.15	3.15	2.95	2.45	2.45	2.40
29	3.10	F	F	3.30s	F	F	3.10Fs	3.40	3.15	2.85	2.25RH	2.40

Count	22	21	20	22	24	25	26	27	28	29	28	26
Median	2.90	3.00	3.10	3.15	3.15	3.25	3.05	3.00	2.80	2.50	2.40	2.40
Mean	2.90	3.00	3.05	3.15	3.15	3.25	3.00	3.00	2.80	2.55	2.40	2.35

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M 3000) F2

Unit : .....

Month : February 1960

TABLE 22 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

UT : 01.00.00

12	13	14	15	16	17	18	19	20	21	22	23	Date
C	2.10	2.10	2.15	2.20	2.25	2.20	2.15	2.20	2.40	2.30	U2.55s	1
2.20	2.20	2.20	2.20	2.15	2.15	2.05	1.90	Fs	F	2.60	U2.70s	2
2.20	2.15	2.15	2.20	2.25	2.30	2.10	2.00	F	F	F	F	3
2.10	2.10	2.10	2.10	2.20	2.20	2.05	2.00	U2.00F	Fs	F	F	4
C	2.15	2.20	2.10	2.10	2.05	2.15	2.20	2.20	2.25	2.45	2.65	5
2.15	2.10	2.10	2.10	2.10	2.00	2.05	2.00	2.15F	U2.40F	F	U2.40F	6
C	C	C	2.10	2.15	2.15	2.20	2.00F	F	F	F	F	7
C	2.20	2.15	2.15	C	2.10	2.10	2.10	F	F	F	U2.35F	8
2.20	2.10	2.10	2.10	2.15	2.10	2.20	2.00	F	F	F	F	9
2.40	2.30	2.35	2.30	2.30	2.30	U2.10s	U2.00F	F	F	F	U2.15F	10
2.30	2.20	2.30	2.20	2.15	2.15	2.10	1.95	F	U2.25F	F	F	11
2.20	2.25	2.30	2.35	2.35	2.25	U2.10s	C	C	C	C	F	12
2.35	2.35	2.30	2.35	2.25	2.30	2.25	U2.00F	F	F	F	F	13
2.30	2.25	2.20	2.15	2.15	2.15	J2.25s	U2.25s	U2.20s	2.30	U2.50F	2.80	14
2.35	2.35	2.40	2.35	2.30	2.25	U2.25s	2.05F	F	F	F	F	15
2.40	2.40	2.45	2.40	2.40	2.35	2.45	U2.10s	F	F	F	F	16
2.50	2.40	2.45	2.45	2.40	2.35	2.30	U2.25s	J2.10F	U2.20F	U2.40s	2.90	17
2.40	2.50	2.65	2.55	2.50	U2.45s	U2.35s	2.30	U2.45s	U2.60s	U2.75s	3.00	18
2.40	2.55	2.40	2.40	2.45	2.40	2.45	2.30	U2.40s	U2.40s	F	F	19
2.30	2.30	2.35	2.30	U2.45s	2.50	U2.35s	2.20	U2.30s	2.40	U2.65s	2.80	20
2.25	2.45	2.45	2.40	2.25	U2.20s	2.35	2.35	U2.40s	U2.55s	2.70	2.80	21
2.30	2.30	2.30	2.35	2.40	U2.30s	U2.40s	U2.20s	F	F	U2.55s	2.65	22
2.45	2.40	2.30	2.35	2.40	2.35	U2.25s	2.10	U2.10s	F	2.40	2.70	23
C	2.30	2.30	2.30	2.30	2.40	2.35	2.05	U2.10F	C	C	C	24
2.40	2.40	2.30	2.30	U2.30s	2.30s	2.30s	2.00	F	F	F	F	25
2.40	2.45	2.50	2.50	U2.40s	2.35	2.20	2.00s	F	F	F	3.00s	26
2.45	2.25	2.25	2.25	2.30s	2.35	2.40	2.25	2.40	S	3.05	3.10	27
2.35	2.30	2.25	2.30	2.40	2.40	2.30	2.05	F	F	F	F	28
2.45	2.40	2.30	2.30	2.30	2.20	2.20	2.00	F	F	F	F	29
24	28	28	29	28	29	29	28	13	10	11	15	Count
2.35	2.30	2.30	2.30	2.30	2.30	2.25	2.05	U2.20	U2.40	2.55	2.70	Median
2.30	2.30	2.30	2.30	2.30	2.25	2.25	2.10	U2.25	U2.40	2.60	2.75	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M3000) F2

TABLE 22 (Contd.)

Latitude : 10° 2' N

Unit : ....

Ionospheric Data

Longitude : 77° 5' E

Month : February 1960

75° 0' E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	F	F	3.10	3.30	3.30	3.35	2.85	2.60	2.30	2.40	2.20	2.15
2	2.80	2.80	2.95	3.00	3.05R	3.35	3.00	3.00	2.60	2.20	2.20	2.20
3	2.80	2.60	2.70	2.85	3.05	3.05	2.90	2.65	2.30	2.25	2.20	2.20
4	2.75	F	F	3.05F	3.20	3.25	U2.95s	2.90	2.65	2.20	2.35	2.20
5	2.75	U2.80F	F	F	2.80	3.10	3.05	2.90	2.65	2.35	2.15	C
6	U2.80s	2.70	2.75	3.00	3.10	3.10	2.80	2.70	2.45	2.40	2.30	2.20
7	C	C	C	C	C	C	C	C	C	2.30	C	C
8	F	U3.00F	3.00	U3.15F	U3.20F	3.20	3.10	3.00	2.75	2.55	2.35	2.10
9	U2.70F	2.80F	2.90	3.15	3.35	3.30	2.80	2.85	2.65	2.50	2.25	2.20
10	F	U3.15F	F	F	U3.20F	F	U2.80F	2.75	2.50	2.50	2.30	2.40
11	F	U2.80F	U3.00F	3.00	3.15	3.35	3.00	2.80	2.50	2.40	2.30	2.35
12	F	U2.80s	3.00	2.95	U3.10F	F	F	2.85	2.60	2.30	2.25	2.25
13	F	Fs	U3.20s	U3.20Fs	U3.30F	3.10	2.90	C	2.60	2.40	2.30	2.30
14	3.10	U3.30s	3.30	U3.25s	U3.00s	U2.70F	2.70	2.70	2.65	2.40	2.35	2.40
15	U3.20s	3.25	U3.20s	U2.95s	3.00	3.05	3.10	3.00	2.85	2.55	2.25	2.30
16	F	F	3.35	3.40	3.20	3.40	3.10	3.00	2.70	2.50	C	2.40
17	F	Fs	U3.25s	Fs	3.50	3.25	3.10	3.00	2.85	2.45	2.30	2.40
18	2.90	U2.95s	3.00	3.05	3.10	3.40	U3.25s	3.25	3.15	2.85	2.70	2.55
19	3.05	3.00	3.10	3.25	3.45	3.30	3.10	2.90	2.60	2.60	2.40	2.50
20	3.00	U3.20s	3.20	3.00	2.80	3.20	3.30	3.25	3.10	2.85	2.65	2.40
21	3.00	3.10	3.25	3.40	3.50	3.30	3.10s	2.80	2.60	2.55	2.50	2.30
22	3.10	3.20	U3.20s	3.20	3.30	3.40	3.15	3.10	2.90	2.65	2.40	2.25
23	3.00	3.20	3.10	3.10	3.20	3.50	3.10	2.90	2.65	2.35	2.40	2.45
24	2.90	3.10	3.25	3.20	3.50	3.50	3.10	2.85	2.55	2.60	2.45	2.45
25	F	U3.10s	U3.10s	F	3.40	U3.40R	3.20	U3.05s	2.70	2.25	2.50	2.40
26	F	F	3.20s	3.10s	F	3.40	3.15	3.00s	2.55	2.40	2.50	2.40
27	F	F	F	3.20	3.30	3.30	3.10s	2.80s	2.50	2.50	2.40	2.50
28	U3.10s	3.10	3.10	3.10	3.20s	3.30	3.25	3.10	2.70	2.30	2.45	2.35
29	3.20	F	3.30	3.30	F	F	3.40	3.30s	3.05	2.55	U2.15RH	2.40

Count	17	20	24	24	26	25	27	27	28	29	27	27
Median	3.00	3.05	3.10	3.10	3.20	3.30	3.10	2.90	2.65	2.40	2.35	2.35
Mean	2.95	3.00	3.10	3.15	3.20	3.25	3.05	2.90	2.65	2.45	2.35	2.35

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M3000)F2

Unit : . . . .

Month : February, 1960.

TABLE 22 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10.2° N.

Longitude : 77°5° E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.15	2.10	2.10	2.15	2.25	2.25	U2.15s	2.15	2.30	U2.35s	2.55	2.60	1
2.15	2.20	2.20	2.20	2.15	U2.10s	U2.00RS	U2.00s	F	2.30	2.60	U2.80s	2
2.20	2.20	2.20	2.20	2.30	2.20	2.05	U2.05F	F	F	F	2.60	3
2.10	2.10	2.10	2.15	2.20	2.10	U2.10s	U1.95F	C	Fs	U2.50F	2.75	4
2.10	2.15	2.20	2.10	2.05	2.10	2.15	2.10	2.20	2.40	2.60	2.65	5
2.10	2.10	2.15	2.15	2.10	2.00	2.05	U2.00F	U2.20F	2.60F	2.65	U2.50F	6
C	C	2.10	2.10	2.15	2.15	2.10	F	F	F	F	2.80	7
2.15	2.15	2.20	C	C	2.00	2.10	2.05	F	F	U2.70F	F	8
2.15	2.15	2.15	2.10	2.15	2.15	2.15	F	F	F	F	F	9
2.35	2.35	2.30	2.30	2.25	U2.20R	U2.00s	F	F	F	F	F	10
2.20	2.20	2.25	2.25	2.15	2.20	2.10	U2.00F	F	F	F	2.70	11
2.20	2.30	2.30	2.35	2.30	2.15s	2.10	C	C	C	C	F	12
2.30	2.30	2.30	2.35	2.25	2.30	2.15	U2.00F	F	F	F	Fs	13
2.30	2.25	2.20	2.20	2.15	2.20	U2.30s	2.20	2.25F	2.45	Fs	2.95	14
2.35	2.35	2.40	2.35	2.30	U2.25s	2.20s	F	F	F	F	F	15
2.40	2.50	2.45	2.40	2.40	U2.30s	2.20	F	F	F	F	3.00	16
2.40	2.40	2.45	2.40	2.30	U2.40s	U2.30s	U2.10F	F	U2.40s	2.80	2.90	17
2.45	2.60	2.60	2.55	2.50	2.45	U2.30R	2.35	2.55	U2.65s	U2.85R	3.05	18
2.50	2.45	2.40	2.40	2.45	2.35	2.40	2.25	2.40	2.60	F	3.00	19
2.30	2.30	2.30	2.40	2.45	U2.50s	2.30	2.10	U2.30Fs	U2.50s	U2.75s	2.90	20
2.35	2.50	2.40	2.30	U2.20R	2.25	2.35	U2.40s	U2.35F	2.60	2.75	U2.90s	21
2.40	2.30	2.30	2.35	2.35	U2.30s	U2.35s	2.10	U2.20F	U2.50Fs	2.60	2.90	22
2.30	2.35	2.35	2.40	2.40	2.25	2.15	U2.10s	U2.10F	U2.20F	2.60	2.90	23
2.40	2.25	2.30	2.35	2.35	2.40	2.25	U2.05F	F	F	F	F	24
2.45	2.30	2.30	2.30	U2.25s	2.35s	2.15	F	F	F	F	F	25
2.40	2.45	2.50	2.45	U2.40R	2.35s	2.10R	F	F	F	F	F	26
2.35	2.25	2.25	2.25	2.35	2.40	2.35	2.30	2.60	2.95	3.15	U3.05s	27
2.35	2.30	2.25	2.35	2.40	2.35	2.15	F	F	F	F	F	28
2.40	2.35	2.30	2.30	2.25	2.25	2.10	U1.90W	U2.00F	U2.30F	F	F	29
28	28	29	28	28	29	29	20	12	14	13	18	Count
2.30	2.30	2.30	2.30	2.30	2.25	2.15	2.10	2.30	2.50	2.65	2.90	Median
2.30	2.30	2.30	2.30	2.30	2.25	2.20	2.10	2.30	2.50	2.70	2.85	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : foF2

Unit : Mc

Month : March, 1960.

TABLE 23  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2° N.

Longitude : 77.5° E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	10.4	F	7.2	6.2	F	U5.2F	6.2H	9.2	11.6	12.5	11.7	10.4
2	10.7	10.5	9.4	8.8	8.8	8.8	9.1	11.3	13.0	13.8H	13.7H	U11.6W
3	10.8	10.8	U10.4S	8.8	8.2	8.2	8.6	10.7	11.8	13.5	13.8	13.4
4	11.3	10.4	8.9	U7.3S	6.4	5.1	5.6	9.2	11.4	11.8	11.3	10.7
5	Fs	Fs	Fs	F	7.5	F	7.9	10.6	11.7	12.1	12.0	11.7
6	11.8	10.8	10.2	U8.2F	7.2	6.1	5.6	U9.2S	10.6	10.7	10.1	C
7	8.9	7.9	F	U5.9S	U6.3F	6.4	6.4	10.0	12.1	12.4	11.6	10.7
8	F	U10.0F	7.9F	6.5	U5.0F	F	U5.2F	9.2	11.0	11.8	10.9	9.7
9	F	U9.3F	8.4F	7.0F	5.9	5.5	6.8	8.8	10.7	11.5	11.7	11.6
10	U8.2F	8.4	9.0	8.1	7.5	6.7	6.9	10.0	11.8	12.2	11.3	10.8
11	F	10.8	F	F	8.3	6.8	6.8	9.9	11.4	11.1	10.6	10.1
12	12.6	13.7	11.4	8.9	7.0	4.4	4.8	9.0	10.8	10.6	10.1	10.0
13	F	F	8.8F	F	F	U3.5F	U4.9S	9.0	11.0	C	C	C
14	F	F	8.6	F	U6.2S	5.8	F	U9.6FS	U11.2R	11.0	10.0	9.5
15	U9.2S	F	F	8.0	7.1	U6.4S	6.4	9.7	U11.6S	12.3	12.4R	11.0
16	10.0	9.2	8.9	8.7	F	6.3	5.9	U9.8S	11.0	11.3	13.4	14.2
17	14.0	14.2	12.6	11.6	11.6	10.4	8.8	11.0	12.8	13.8	14.0	13.6
18	F	11.0	8.5	8.2	U8.6F	U8.0F	6.4	10.0	12.4	12.6	10.6	10.6
19	U10.9F	11.5	U9.7F	F	F	F	F	10.1	12.0	13.0	13.2	11.8H
20	12.3	F	U9.9S	8.7	U8.3F	7.7	8.1	10.5	C	C	C	C
21	11.8	10.9	U9.7F	8.4	U7.4S	5.8	6.2	10.0	11.4	12.7	12.7	11.8
22	12.0	10.8	9.6	7.7	7.3	6.2	6.0	U9.7S	11.5	12.7	12.2	11.7
23	F	U9.8S	9.0	7.8	5.7	3.5	5.6	9.6	11.7	12.7	11.8	10.7
24	10.4	F	F	7.4	U6.4F	4.9	6.3	U9.6S	11.3	11.8	11.1	11.0
25	F	F	11.2	F	F	F	8.6	10.6	RH	10.1	10.1	10.4
26	F	U11.0F	F	F	6.1	4.0	5.8	9.8	11.6	11.0	10.6	10.8
27	F	F	10.4	U9.4F	U6.1F	U4.5FS	6.3	10.0	11.6	11.6	10.3	10.1
28	F	11.2	F	F	F	3.3	5.8	10.0	U11.8S	13.1	12.6H	11.0
29	Fs	U12.6FS	Fs	U9.2FS	F	F	7.1F	10.5	12.4	12.8R	11.7	11.3
30	F	F	F	F	F	F	6.0	U9.8S	11.8	13.1	12.8H	10.6
31	F	F	F	11.2F	10.4	9.7	U9.2S	11.7	13.4	13.6	11.7	10.2
Count	16	20	21	22	23	25	29	31	29	29	29	28
Median	10.8	10.8	9.4	8.2	7.2	6.1	6.3	9.9	11.6	12.3	11.7	10.8
Mean	11.0	10.7	9.5	8.3	7.4	6.1	6.7	9.9	11.7	12.2	11.7	11.1

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF2

Unit : Mc

Month : March, 1960.

TABLE 23 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
10.3	9.9	10.0	10.6	11.3	11.8	11.0	9.9	10.5	11.3	11.6	11.5	1
11.4	11.8	11.8	11.8	12.4	12.5	11.4	10.5	10.7	11.9	12.7	11.4	2
13.1	12.8	13.3	13.3	13.6	13.7	12.8	11.1	10.8	U11.6F	U12.4s	12.4	3
10.8	11.0	11.2	11.5	11.7	11.8	11.1	U9.0R	F	F	F	F	4
11.7	11.7	12.6	13.3	13.7	13.1	12.7	F	U8.7F	F	11.5	12.5	5
9.6	9.6	9.7	10.0	10.4	11.0	11.0	9.1	8.4	F	9.4F	F	6
10.5	10.5	10.8	11.3	11.4	11.3	10.7	8.6	F	F	F	F	7
9.5	9.7	10.4	10.8	10.8	10.7	10.1	8.5F	F	C	F	F	8
11.7	11.7	11.6	11.3	11.0	10.6	U9.4s	8.7	U9.2F	F	F	F	9
10.9	10.7	11.0	11.6	12.5	12.8	12.7	U11.1F	F	F	F	F	10
10.8	11.4	12.2	13.1	13.6	13.5	13.0	U12.0R	U12.0Fs	U11.6s	12.6	12.6	11
10.0	10.6	10.9	11.6	12.0	U11.8s	U11.0R	U9.0F	F	F	F	Fs	12
C	C	9.5	9.9	10.6	10.8	10.8	U9.6s	F	F	F	F	13
9.4	9.4	9.8	10.4	11.0	U11.8s	11.6	U9.4s	F	F	F	F	14
10.8	10.6	10.9	11.4	12.0	12.4	11.7	U10.2s	F	F	F	F	15
14.2	14.3	14.0	13.6	13.0	12.4	12.4	12.8	13.0	13.4	14.0	13.0	16
12.3	11.8	12.5	12.7	13.0	13.0	12.6	11.2	10.6	F	F	Fs	17
10.7	11.4	11.7	11.7	12.0	12.2	11.4	9.5	F	F	F	F	18
10.0	9.7	9.8	10.3	11.0	11.2	11.0	9.5	U8.8F	9.5	U10.6F	F	19
C	11.2	11.6	12.1	12.4	12.6	11.5	9.0	F	F	F	F	20
11.2	11.5	11.8	12.7	12.8	12.9	U12.0s	F	F	U9.6s	11.4	F	21
11.6	11.8	12.5	13.0	13.1	12.8	U11.1R	8.2	F	F	F	U10.8F	22
10.8	11.8	12.6	13.1	13.5	13.2	12.7	U10.8F	F	F	F	F	23
10.5	10.8	11.8	12.4	12.8	U12.5R	U12.0s	U9.8Fs	F	F	F	F	24
10.3	10.9	11.6	12.9	13.4	13.6	U13.0s	U10.8Fs	F	F	F	F	25
11.2	12.0	13.0	13.6	14.2	14.1	U13.8s	F	F	F	F	F	26
10.5	10.8	11.5	12.2	12.4	12.8	13.0	11.4F	F	F	F	U13.2s	27
10.7	11.3	11.8	12.8	12.9	12.6R	12.6	10.0	F	F	F	F	28
10.8	11.4	11.9	12.6	13.1	12.8	U12.0s	10.8	F	F	F	F	29
10.9	11.2	11.8	C	13.2	14.2	13.7	U11.2F	F	F	F	F	30
10.7	11.3	11.8	12.6	12.9	12.3s	12.5	15.2s	13.4	11.0	7.8	6.2s	31
29.	30	31	30	31	31	31	28	11	8	10	9	Count
10.8	11.2	11.7	12.2	12.5	12.6	12.0	10.0	10.6	U11.4	11.6	12.4	Median
10.9	11.2	11.5	12.0	12.4	12.4	11.9	10.2	10.6	U11.2	11.4	11.5	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF2  
Unit : Mc  
Month : March, 1960.

TABLE 23 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2' N.  
Longitude : 77°5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	F	7.8	6.7	F	U5.7F	U5.1F	6.6	10.3	12.4	12.3	10.9	10.3
2	10.8	9.9	8.7	8.8	8.8	8.7	10.1	12.1	13.3	14.1	12.9H	11.1
3	10.7	10.4	U9.8s	8.7	8.3	8.0	9.7	11.2	12.9	13.9	13.6	13.3
4	11.0	U9.4s	8.4	6.7	5.5	4.7	U7.6s	10.5	11.9	11.7	10.8	10.7
5	Fs	Fs	U8.6s	8.3	7.3	U6.8s	9.3	11.3	11.7	11.9	11.7	11.6
6	11.4	10.7	9.1	7.6	7.0	5.2	7.4	10.2	10.8	10.6	10.2	9.7
7	8.6	U7.2s	U6.0F	U6.0F	6.6	U6.1s	8.2	11.1	12.2	12.2	11.0	10.6
8	F	U10.0F	6.8	6.0	F	F	7.4	10.4	11.6	11.8	10.4	9.4
9	F	U9.3F	F	6.2	5.7	5.6	8.0	10.1	11.4	11.6	11.8	11.5
10	7.9	8.7	8.5	7.8	7.0	6.4	8.5	10.8	12.2	11.7	11.2	10.8
11	F	U9.6s	F	9.0	7.8	5.6	8.4	10.8	11.0	11.0	10.0	10.6
12	13.2	12.6	6.0	7.7	5.7	2.8	7.0	10.0	10.8	10.4	10.0	10.0
13	F	F	F	F	J4.4F	F	U7.4s	10.2	C	C	C	C
14	F	U10.0F	F	U6.8F	J6.3s	U5.6F	U8.0F	U10.8Fs	11.4	10.4	9.8	9.4
15	U9.2s	U8.6s	F	U7.6s	6.5	U5.8s	8.3	10.8	12.0	12.6	11.8	10.8
16	9.5	8.8	9.2	8.7	F	4.7	8.1	11.0	11.2	12.6	13.9	14.3
17	14.2	13.4	11.6	12.2	10.6	9.3	10.2	12.2	13.6	14.1	13.9	12.6
18	11.7	U9.7s	8.4	8.1	U8.5F	6.6	8.2	11.2	12.6	11.9	10.6	10.0
19	11.7	10.7	F	F	F	F	8.5	11.0	12.6	13.4	12.6H	10.6
20	11.6	F	9.2	9.0	7.9	7.6	9.4	C	C	C	C	C
21	11.6	F	F	7.9	6.8	F	8.3	10.7	12.0	12.7	12.1	11.4
22	11.4	10.0	8.7	7.4	7.1	5.0	7.9	10.6	12.2	12.8	11.8	11.4
23	U10.6F	F	8.4	7.2	4.6	3.3H	7.9	10.7	12.4	12.5	11.0	10.8
24	F	F	7.6	F	5.4	4.3	8.2	10.7	11.6	11.3	11.2	10.7
25	F	U11.4F	F	11.2	10.7	U8.3Fs	9.6	11.0	10.0	10.0	10.2	10.1
26	F	9.9	F	6.8	4.8	3.1	8.2	11.0	11.6	10.5	10.6	11.1
27	F	F	F	U7.6F	U5.4F	U3.8F	8.5	11.0	12.0	10.5	10.2	10.3
28	F	F	F	6.7F	4.7	3.4H	8.2	11.0	12.6	13.0	11.5	10.8
29	F	Fs	F	F	F	6.4F	9.2	11.7	12.8	11.7	11.3	11.1
30	12.7	10.7	F	F	F	F	8.2	10.8	12.6	13.2	11.6H	10.8
31	F	F	F	10.5	10.4	8.6	10.4	12.8	13.6	12.8	10.5	10.5
Count	17	21	17	25	26	26	31	30	29	29	29	29
Median	11.4	9.9	8.6	7.8	6.7	5.6	8.2	10.8	12.0	11.9	11.2	10.8
Mean	11.0	9.9	8.6	8.0	6.9	5.8	8.4	10.9	12.0	12.0	11.3	10.9

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF2

Unit : Mc

Month : March, 1960.

TABLE 23 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
10.2	9.8	10.4	11.0	11.6	11.4	10.7	U10.0s	10.8	11.6	11.3	10.8	1
11.8	11.7	11.5	11.9	12.4	11.7	10.8	10.5	11.6	12.7	12.4	10.9	2
13.0	13.0	13.1	13.5	13.8	13.4	11.8	10.7	11.1	12.1	12.4	11.6	3
10.9	11.1	11.4	11.5	U11.6s	11.6	U10.2s	U8.3F	F	F	F	Fs	4
11.7	12.1	12.7	13.5	13.6	12.9	11.7	F	9.3	10.6	12.4	12.1	5
9.4	9.5	9.8	10.2	10.7	10.8	10.4	F	8.6	U9.2F	F	F	6
10.6	10.6	11.0	11.4	C	11.0	U9.8s	U7.8F	F	F	F	F	7
9.4	10.2	10.5	10.7	10.6	10.5	9.5	F	C	U9.2F	F	F	8
11.7	11.6	11.6	11.1	10.8	10.3	9.4	8.6	U9.8F	F	F	F	9
10.9	10.9	11.2	12.0	12.9	12.9	12.0	F	F	F	F	F	10
11.4	11.8	12.6	13.4	13.6	U13.2R	J12.4R	U11.8Fs	U12.0s	12.2	12.6	12.6	11
10.2	10.7	11.3	12.0	U12.1R	U11.6s	U10.0s	F	F	F	F	F	12
C	C	9.5	10.4	10.8	10.8	U10.5s	8.6	F	F	F	12.6	13
9.4	9.6	10.0	10.8	11.4	U11.8s	11.0	F	F	F	F	F	14
10.7	10.7	11.0	11.7	12.3	U11.8s	11.2	F	F	F	F	10.6F	15
14.6	14.2	14.0	U12.8R	12.2	12.4	12.6	12.8	13.2	13.7	13.5	13.2	16
12.2	12.3	12.6	12.9	13.2	12.6	12.0	U10.6F	C	F	F	12.5	17
11.0	11.3	11.7	12.0	12.4	U11.8s	10.5	F	F	F	F	F	18
9.7	9.8	10.1	10.6	11.2	11.0	10.6	8.7	9.0	F	U11.3F	F	19
C	11.4	12.0	12.3	12.5	12.2	10.8	F	F	F	F	Fs	20
11.3	11.5	12.7	12.7	13.1	12.6	11.0	U8.5F	U8.9s	11.4	11.6	U11.8s	21
11.8	12.0	12.6	13.1	13.0	12.4	U10.6Rs	F	F	F	F	F	22
11.3	12.0	12.8	13.4	13.5	13.1	U11.8s	F	F	F	F	Fs	23
10.7	11.4	12.1	12.7	12.6	12.2	11.4s	F	F	F	F	F	24
10.6	11.3	12.4	13.1	13.7	U13.2s	J12.2s	F	F	F	F	F	25
11.7	12.4	13.3	13.8	14.1	U14.2s	13.2	F	F	F	F	F	26
10.6	10.9	11.8	12.4	12.6	13.0	12.6	F	F	F	F	F	27
10.8	11.7	12.5	12.7	12.8R	12.6R	11.8s	F	F	F	F	F	28
10.8	11.6	12.4	12.9	13.1	12.8	U11.6s	F	F	F	F	F	29
11.0	11.2	C	C	13.8	14.2	12.8	F	F	F	F	F	30
11.0	11.6	12.1	12.8	12.6	12.4	13.6	15.6	11.8	9.6	6.9s	6.5	31
29	30	30	30	30	31	31	13	11	10	9	11	Count
10.9	11.4	11.9	12.4	12.6	12.4	11.2	10.0	10.8	11.5	12.4	11.8	Median
11.0	11.3	11.8	12.2	12.5	12.2	11.3	10.2	10.6	11.2	11.6	11.4	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF1  
Unit : Mc  
Month : March, 1960.

TABLE 24  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2' N.  
Longitude : 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L <sup>LH</sup>	L <sup>LH</sup>	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5												
6								L	L	L	L	C
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10												
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15												
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20												
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25												
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
31								L	L	L	L	L
Count								..	..	..	..	..
Median								..	..	..	..	..
Mean								..	..	..	..	..

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : foF1

Unit : Mc

Month : March, 1960.

TABLE 24 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L <sub>H</sub>	L	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
L	L	L	L	L <sub>H</sub>	L							5
L	L	L	L	L								6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
L	L	L	L	L	L							31
..	..	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF1  
 Unit : Mc  
 Month : March, 1960.

TABLE 24 (Contd.)  
 Ionospheric Data  
 75°0'E Mean Time

Latitude : 10°2' N.  
 Longitude : 77°5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4							L	L	L	L	L	L
5								L	L	L	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8							L	L	L	L	L	L
9							L	L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16							L	L	L	L	L	L
17							L	L	L	L	L	L
18							L	L	L	L	L	L
19							L	L	L	L	L	L
20							L	L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24							L	L	L	L	L	L
25								L	L	L	L	L
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29							L	L	L	L	L	L
30								L	L	L	L	L
31								L	L	L	L	L
Count							..	..	..	..	..	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : FoF1

Unit : Mc

Month : March, 1960

TABLE 24 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L <sup>H</sup>	L	L							1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L								5
L	L	L	L	L								6
L	L	L	L	C								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L								11
L	L	L	L	L								12
C	C	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	L	L	L								16
L	L	L	L	L								17
L	L	L	L	L	L							18
C	L	L	L	L								19
												20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	A	A	L								25
L	A	L	L	L								26
L	L	L	L	L								27
L	L	L	L	L								28
B	B	L	L	L								29
L	L	C	C	L								30
L	L	L	L	L								31
..	..	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : foE  
Unit : Mc  
Month : March, 1960

TABLE 25  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								2.5H	A	A	A	A
2								2.5	U3.1A	A	A	A
3								U2.4R	A	A	A	A
4								2.6H	A	A	A	A
5								A	A	A	A	A
6								A	A	A	A	C
7								2.6	A	A	A	A
8								2.6	A	A	A	A
9							2.2	A	A	A	A	A
10								2.5H	A	A	A	A
11								A	A	A	A	A
12								A	A	A	A	A
13								A	A	C	C	C
14								A	A	A	A	A
15								2.6	A	A	A	A
16								2.6	R	B	3.6	A
17								2.5	A	A	A	A
18								2.6H	A	A	A	A
19								2.6	3.3	A	A	A
20								2.7	C	C	C	C
21								U2.6R	F	A	A	A
22								2.6	A	A	A	A
23								2.6	A	A	A	A
24								A	A	A	A	A
25								A	A	A	A	A
26								A	A	A	A	A
27								2.7	A	A	A	A
28								2.7	A	A	A	A
29								2.7	A	A	B	B
30								2.8R	R	A	A	A
31								F	A	A	A	A
Count							1	20	2	..	1	..
Median							..	2.6	..	..	..	..
Mean							..	2.6	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE  
Unit : Mc  
Month : March, 1960

TABLE 25 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A	A							1
A	A	A	A	A	A							2
A	A	A	A	A	A							3
A	A	A	A	A	A							4
A	A	A	A	A	A							5
A	A	A	A	A	A							6
A	A	A	A	A	A							7
A	A	A	A	A	A							8
A	A	A	A	A	A							9
A	A	A	A	A	A							10
A	A	A	A	A	A							11
A	A	A	A	A	A							12
C	C	A	A	A	A							13
A	A	A	A	A	A							14
A	A	A	A	A	A							15
3·6	A	A	A	A	F							16
A	A	A	A	A	A							17
A	A	A	A	A	A							18
A	A	A	A	A	F							19
C	A	A	A	A	A							20
A	A	A	A	A	A							21
A	A	A	A	A	F							22
A	A	A	A	A	F							23
A	A	A	A	A	A							24
A	A	A	A	A	A							25
A	A	3·7	3·5 <sub>H</sub>	3·1	A							26
A	B	A	A	A	A							27
A	B	A	A	A	A							28
B	B	B	B	A	A							29
A	B	A	C	3·2	A							30
A	A	A	A	A								31
1	..	1	1	2	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : foE  
Unit : Mc  
Month : March, 1960

TABLE 25 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								2.8R	A	A	A	A
2								U2.8R	A	A	A	A
3								U2.8R	A	A	A	A
4							U2.0R	A	A	A	A	A
5							A	A	A	A	A	A
6							1.9	A	A	A	A	A
7							2.3	A	A	A	A	A
8								A	A	A	A	A
9							2.1H	A	A	A	A	A
10							1.9	A	A	A	A	A
11							U2.2R	A	A	A	A	A
12								A	A	A	A	A
13								A	C	C	C	C
14							R	A	A	A	A	A
15							2.1H	2.9	A	A	A	A
16								2.8	R	R	A	A
17								2.9	A	A	A	A
18							R	A	A	A	A	A
19							2.0	3.0	A	A	A	A
20							2.0	C	C	C	C	C
21							U2.4R	U3.1R	A	A	A	A
22							R	U3.1R	A	A	A	A
23								F	A	A	A	A
24								A	A	A	A	A
25							2.1	A	A	A	A	A
26							U2.1R	A	A	A	A	A
27								A	A	A	A	A
28								3.0	A	A	A	A
29								3.2	A	A	A	A
30							2.3	3.1	A	A	A	A
31								A	A	A	A	A
Count							13	12	..	..	..	..
Median							2.1	3.0	..	..	..	..
Mean							2.0	3.0	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE  
Unit : Mc  
Month : March, 1960

TABLE 25 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2' N  
Longitude : 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	A	A	A	A							1
A	A	A	A	A	A							2
A	A	A	A	A	A							3
A	A	A	A	A	A							4
A	A	A	A	A	A							5
A	A	A	A	A	A							6
A	A	A	A	A	C							7
A	A	A	A	A	A							8
A	A	A	A	A	A							9
A	A	A	3.2	A	A							10
A	A	A	A	A	A							11
A	A	A	A	A	A							12
C	C	A	A	A	A							13
A	A	A	A	A	B							14
A	A	A	A	A	A							15
A	A	A	A	F								16
A	A	A	A	A	A							17
A	A	A	A	A	A							18
A	A	A	A	A	A							19
C	A	A	A	A	A							20
A	A	A	A	A	A							21
A	A	A	A	A	F							22
A	A	A	A	A	A							23
A	A	A	A	A	A							24
A	A	A	A	A	A							25
A	A	3.5	3.4	U3.0A								26
A	A	3.8	A	A								27
A	A	A	A	A								28
B	B	B	3.5	A								29
B	A	C	C	3.1F								30
A	A	A	A	A								31
..	..	2	3	2	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs  
Unit : Mc  
Month : March, 1960

TABLE 26  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	3.9				1.8			G	11.4	11.4	12.7	12.6
2								G	4.0	10.7	12.7	12.8
3			S					G	8.8	9.6	12.1	12.4
4								G	10.3	11.4	12.7	12.3
5						3.9		U7.5s	10.4	11.8	14.4	13.4
6								U7.0s	10.8	12.0	12.6	C
7						4.2		G	9.0	10.8	12.6	12.2
8				8.4	4.0			G	11.0	12.0	11.8	11.6
9						8.4	G	8.4	U9.0s	12.2	12.4	12.8
10								G	9.6	11.4	12.0	12.8
11		4.8	3.2	6.0	7.0			7.4	11.6	11.0	12.0	12.6
12								7.0	10.4	11.0	12.8	12.4
13								7.0	11.0	C	C	C
14								U7.2s	10.4	12.0	12.2	12.8
15								G	10.0	12.0	12.4	13.2
16								G	G	6.0	5.8	9.6
17	2.0	1.5						G	8.8	9.8	12.6	12.2
18								G	10.4	10.8	10.2	9.2
19								G	6.8	10.8	12.3	12.7
20			1.9	5.0				G	C	C	C	C
21								5.2	7.6	11.6	12.4	12.4
22								G	8.0	11.4	12.8	12.4
23								G	8.6	10.6	12.6	12.0
24								U8.0s	U11.0s	12.4	13.0	12.0
25	U6.2s		1.8					S	U9.0s	11.0	12.3	12.2
26								U7.0s	9.2s	12.0	12.7	13.0
27	2.5							U8.0s	9.2	11.4	12.0	13.0
28	4.0		3.8					G	U9.0s	13.8	12.4	13.0
29		2.8			3.0			6.0	11.0	12.0	12.6	12.0
30								G	6.0	11.0	12.0	12.0
31		4.8						7.0	10.0	11.4	12.2	12.8
Count	5	4	4	3	4	3	1	30	30	29	29	28
Median	3.9	..	..	..	..	..	..	G	9.4	11.4	12.4	12.4
Mean	3.7	..	..	..	..	..	..	7.1	9.4	11.2	12.2	12.3

- Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs  
Unit : Mc  
Month : March, 1960

TABLE 26 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
12.6	12.6	12.8	10.7	u10.6s	8.8					4.5		1
12.2	12.6	12.6	10.8	11.3	8.2							2
11.8	12.0	10.4	8.1	6.9	7.7							3
11.7	11.7	10.7	10.4	8.6	u8.2s	2.9						4
13.3	12.6	10.7	10.6	11.4	7.8							5
12.6	12.8	12.0	11.8	11.0	8.4							6
12.0	12.8	12.6	10.2	10.8	7.9							7
12.4	12.6	12.8	11.0	11.0	8.2				C			8
12.6	12.0	12.8	10.6	11.0	7.8							9
12.0	10.8	10.8	8.2	u8.6s	8.0							10
11.0	12.0	10.0	8.8	9.2	8.0							11
12.2	12.6	11.4	9.7	8.6	8.6							12
C	C	13.0	12.0	9.4	8.0							13
13.0	12.6	12.0	12.0	10.0	8.0				2.1			14
13.0	13.5	13.0	10.4	10.2	7.8							15
G	9.8	10.8	9.6	9.4	6.8				6.0	3.0	6.6	16
12.7	12.4	11.4	9.8	8.2	6.6							17
10.2	10.5	9.2	9.8	9.4	6.8							18
12.3	12.6	12.0	11.2	9.8	7.6							19
C	13.4	12.4	11.6	10.8	7.6							20
12.4	11.6	11.0	9.5	10.0	6.9							21
11.4	12.0	10.6	10.6	10.4	8.0							22
11.6	11.2	9.3	8.8	u9.0s	8.0							23
12.2	12.0	u11.2s	8.2	u8.8s	S							24
12.0	11.8	9.2	12.8	u10.0s	u7.0s							25
12.0	12.0	5.2	G	G	u8.0s							26
13.0	12.0	10.0	10.8	11.0	7.0					4.0		27
12.0	12.0	11.4	10.8	10.0	8.0							28
B	B	9.8	9.2	10.0	8.2				u5.0s		u6.0s	29
13.0	12.0	12.0	C	8.3	8.0					2.4	2.6	30
12.2	12.6	8.4	12.4	10.2	u8.0s					4.2		31
28	29	31	30	31	30	1	..	..	3	4	4	Count
12.2	12.0	11.2	10.5	10.0	8.0	..	..	..	..	..	..	Median
12.2	12.1	11.0	10.4	9.8	7.8	..	..	..	..	..	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs  
Unit : Mc  
Month : March, 1960

TABLE 26 (Contd.)  
Ionospheric Data  
75.0 E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1					1.7			G 3.0	10.8 9.7	12.6 12.7	12.4 12.6	13.4 11.2
2								G	11.2	12.3	11.8	12.3
3			2.6				G	9.2	11.0	12.6	11.6	12.1
4					4.3	3.8	3.8	11.6	12.2	12.8	14.5	13.7
5												
6							G	10.0	11.6	12.6	12.6	12.8
7							G	8.2	11.0	12.4	12.0	12.2
8					4.0			10.4	11.0	12.2	11.8	12.6
9							G	9.0	10.8	12.6	12.6	12.0
10							G	6.8	9.8	12.2	13.2	12.6
11	1.9	4.0	4.2	7.0	7.4		G	9.6	10.6	12.0	12.2	12.6
12								10.0	10.0	11.0	12.0	12.3
13							G	8.0	C	C	C	C
14							G	10.0	11.0	12.4	13.6	12.6
15							G	G	10.4	12.6	13.0	13.0
16								G	G	7.6	10.8	9.2
17	3.8							7.8	8.2	12.0	11.8	12.6
18							2.3	9.4	10.8	10.0	8.8	9.2
19							2.2	G	8.4	12.2	12.6	12.4
20			3.8	3.6			2.5	C	C	C	C	C
21							G	G	9.8	11.6	12.6	12.2
22							G	G	10.8	11.4	12.8	11.4
23					2.9			6.8	10.4	12.4	12.4	12.4
24								11.2	11.6	12.6	11.9	12.8
25	2.5						G	8.8	11.0	12.4	12.4	12.4
26												
27	2.5						G	u9.0s	12.0	13.0	12.6	12.8
28								u9.0s	11.6	11.6	12.6	13.0
29		2.0		2.4				G	11.4	12.4	12.4	12.6
30							G	u8.0s	11.0	12.4	12.0	12.0
31	3.8	u5.0s						G	10.0	10.8	12.8	12.4
									11.0	11.4	12.0	12.2
Count	5	3	3	4	4	1	18	30	29	29	29	29
Median	2.5	..	..	..	..	..	G	8.1	10.8	12.4	12.4	12.4
Mean	2.9	..	..	..	..	..	..	8.9	10.7	12.0	12.3	12.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs  
Unit : Mc  
Month : March 1960.

TABLE 26 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
12.8	12.8	11.6	11.8	8.8	6.4							1
12.3	12.7	11.8	10.7	8.3	S							2
11.9	9.8	9.2	S	8.2	4.6							3
12.3	10.8	11.6	U9.7s	8.1	4.3							4
12.8	12.1	10.8	12.1	8.6	6.8							5
12.6	12.6	12.0	12.0	8.8	6.6							6
13.0	11.8	9.8	9.0	C								7
12.6	11.6	11.0	12.0	8.8	4.2			C				8
12.2	12.0	11.4	9.2	8.6	4.0							9
12.2	11.8	10.8	G	7.0	6.8							10
12.4	10.8	10.6	12.0	9.2	6.0							11
12.2	11.0	10.0	10.6	8.6	8.0							12
C	C	12.0	11.0	8.0	7.0							13
13.0	12.2	12.4	11.0	8.0	U8.0s							14
13.0	13.0	12.0	11.0	8.2	U4.6s							15
8.6	11.6	10.8	10.4	8.0	5.8							16
12.4	12.0	10.0	8.6	7.0	5.7							17
9.4	9.6	11.5	9.5	8.2	5.8							18
12.2	11.8	11.2	10.5	7.8	6.0				2.6	4.6	4.6	19
C	12.8	12.0	10.3	7.8	6.4			4.2	2.2			20
12.8	10.8	9.8	9.6	7.8								21
11.6	11.8	9.8	10.0	8.8	4.6				2.2	2.8		22
10.7	10.8	9.4	8.6	U9.0s	4.2							23
12.4	12.6	10.6	8.3	8.0	S							24
11.6	12.0	U13.0s	U12.0s	U7.5s	S							25
12.1	12.0	G	G	6.8	S							26
12.8	11.8	8.0	11.0	8.0							2.5	27
12.0	12.6	11.4	10.4	8.6								28
B	B	10.0	10.0	8.2				3.2				29
11.4	12.0	C	C	7.0	7.0					3.8	1.9	30
12.8	12.4	8.4	10.0	9.0	4.4							31
28	29	30	29	30	22	..	..	2	3	3	3	Count
12.3	12.0	10.8	10.4	8.2	5.9	..	..	..	..	..	..	Median
12.1	11.8	10.8	10.4	8.2	5.8	..	..	..	..	..	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : fbEs  
Unit : Mc  
Month : March 1960

TABLE 27  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	2.1							G	3.1	3.5	3.8	4.0
2								G	3.2	3.5	3.6	4.0
3			1.5					G	3.0	3.6	3.9	3.9
4								G	3.1	3.5	3.8	4.0
5						1.4		2.6	3.2	3.6	4.0	4.0
6								2.6	3.3	3.7	3.8	C
7								G	3.2	3.6	4.0	4.0
8				2.2				G	3.2	3.6	3.8	4.1
9						1.9	G	2.6	3.2	3.7	3.9	4.0
10								G	3.2	3.6	3.7	4.0
11		1.9		2.0	1.7			2.6	3.2	3.6	3.8	4.0
12								2.6	3.2	3.6	3.8	4.0
13								2.6	3.2	C	C	C
14								2.6	3.2	3.7	4.0	4.0
15								G	3.2	3.6	4.0	4.1
16								G	G	..	4.0	4.0
17	2.0	1.5						G	3.1	3.6	3.8	4.0
18								G	3.2	3.6	4.2	4.3
19								G	..	3.7	3.8	4.0
20			1.4	1.6				G	C	C	C	C
21								..	3.2	3.6	4.0	4.0
22								G	3.3	3.7	4.0	4.2
23								G	3.3	3.8	4.1	4.3
24								2.7	3.3	3.8	4.0	4.2
25	2.8							2.6	3.2	3.6	4.0	4.1
26								2.7	3.2	3.8	4.0	4.1
27								..	3.3	3.7	4.0	4.4
28	1.8							G	3.5	3.8	4.1	4.4
29		1.4			1.4			2.9	3.4	4.0	4.4	4.4
30								G	..	4.0	4.3	4.6
31		1.5						2.9	3.5	3.8	4.2	4.2
Count	4	4	2	3	2	2	1	29	28	28	29	28
Median	..	..	..	..	..	..	..	G	3.2	3.6	4.0	4.0
Mean	..	..	..	..	..	..	..	2.6	3.2	3.7	4.0	4.1

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc

Month : March 1960

TABLE 27 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
4.1	4.0	3.9	3.7	3.2	2.7					1.7		1
4.0	4.1	3.9	3.6	3.2	2.6							2
4.1	4.0	3.8	3.6	3.1	2.6							3
4.1	3.9	3.8	3.6	3.2	2.6	1.7						4
4.2	4.1	3.8	3.6	3.2	2.7							5
4.0	4.0	3.9	3.6	3.3	3.0							6
4.1	4.2	3.8	3.6	3.2	2.6							7
4.0	4.0	3.8	3.6	3.2	2.7				C			8
4.1	4.0	3.8	3.6	3.2	2.6							9
4.0	4.0	3.8	3.6	3.3	3.0							10
4.0	4.0	4.0	3.6	3.3	2.6							11
4.0	4.0	4.0	3.5	3.2	2.8							12
C	C	3.8	3.6	3.2	2.6							13
4.2	4.2	4.0	3.7	3.2	2.8				1.4			14
4.2	4.2	4.0	3.6	3.2	2.6							15
G	4.1	3.9	3.6	3.2	2.6					1.9	2.4	16
4.0	4.0	3.8	3.6	3.2	2.6							17
4.5	4.4	4.1	3.7	3.2	2.8							18
4.1	4.0	4.0	3.6	3.2	2.6							19
C	4.1	3.9	3.6	3.2	2.6							20
4.1	4.2	3.9	3.6	3.2	2.6							21
4.1	4.0	4.1	3.6	3.2	2.8							22
4.2	4.2	4.0	3.8	3.2	2.7							23
4.3	4.0	4.0	3.6	3.2	2.6							24
4.2	4.0	4.0	5.4	3.8	2.6							25
4.2	4.2	4.0	G	G	2.7							26
4.4	4.4	4.0	4.0	4.8	3.2							27
4.4	4.5	4.0	3.8	3.3	2.8							28
B	B			3.4	2.8							29
4.5	4.5	4.0	C	3.4	2.8					1.5	1.5	30
4.4	4.2	3.9	4.6	3.2	2.7					1.9		31
28	29	30	29	31	31	1	..	..	1	4	2	Count
4.1	4.1	3.9	3.6	3.2	2.7	..	..	..	..	..	..	Median
4.2	4.1	3.9	3.7	3.3	2.7	..	..	..	..	..	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs  
Unit : Mc  
Month : March 1960

TABLE 27 (Contd.)  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								G	3.3	3.7	3.9	4.1
2								3.0	3.3	3.6	4.0	4.1
3			1.8					G	3.3	3.7	4.0	4.0
4							G	2.9	3.4	3.7	4.0	4.1
5					1.4	1.6	2.4	3.0	3.5	3.8	4.0	4.1
6							G	2.9	3.5	3.7	4.0	4.1
7							G	3.0	3.5	3.7	4.0	4.1
8								3.0	3.4	3.7	4.0	4.0
9							G	3.0	3.5	3.8	4.1	4.1
10							G	2.9	3.4	3.6	4.0	4.0
11		2.0	1.5	2.4	2.0		G	3.0	3.4	3.7	4.0	4.2
12								2.9	3.4	3.7	4.0	4.0
13							G	3.0	C	C	C	C
14							G	3.0	3.4	3.8	4.0	4.2
15							G	G	3.4	3.8	4.0	4.1
16								G	G		4.0	4.1
17	1.6							2.9	3.4	3.7	4.1	4.3
18							2.3	3.0	3.4	4.0	4.3	4.3
19							2.2	G	3.4	3.7	4.0	4.3
20			1.6				2.5	C	C	C	C	C
21							G	G	3.5	3.8	4.0	4.1
22							G	G	3.4	3.8	4.0	4.2
23				1.7				3.0	3.6	3.8	4.3	4.0
24								3.0	3.6	4.0	4.2	4.1
25							G	3.0	3.4	3.8	4.1	4.1
26							G	3.0	3.5	3.9	4.2	4.2
27	1.6							3.1	3.5	4.0	4.0	4.4
28								G	3.7	4.0	4.2	4.2
29		1.5		1.2				3.2	3.7	4.2	4.4	4.4
30							G	G	3.8	4.0	4.4	4.6
31	1.8							3.1	3.8	4.0	4.2	4.2
Count	3	2	3	3	2	1	18	30	29	28	29	29
Median	..	..	..	..	..	..	G	3.0	3.4	3.8	4.0	4.1
Mean	..	..	..	..	..	..	..	3.0	3.5	3.8	4.1	4.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs  
Unit : Mc  
Month : March 1960

TABLE 27 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
4.1	4.0	3.8	3.6	3.1	2.3							1
4.1	4.0	3.9	3.4	3.0	2.2							2
4.0	4.1	3.8	3.4	3.0	2.2							3
4.1	3.9	3.7	3.4	2.9	2.2							4
4.0	4.0	3.8	3.4	3.0	2.3							5
4.2	4.0	3.7	3.4	4.4	2.5							6
4.2	3.9	3.9	3.4	C								7
4.1	4.0	3.8	3.5	3.0	2.3			C				8
4.2	3.9	3.7	3.4	3.0	2.2							9
4.0	3.9	3.7	G	3.0	2.3							10
4.0	4.2	3.9	3.4	3.0	2.2							11
4.0	4.0	3.8	3.4	3.0								12
C	C	3.8	3.4	3.0	2.3							13
4.2	4.0	3.8	3.4									14
4.2	4.0	4.0	3.4	3.0	2.3							15
4.0	3.9	3.8	3.4	3.0					1.4		1.5	16
4.2	4.2	3.8	3.3	3.0								17
4.4	4.3	3.8	3.4	3.0	2.2							18
4.1	4.0	3.8	3.4	3.0								19
C	4.0	3.8	3.4	3.0								20
4.2	4.0	3.7	3.6	3.0								21
4.1	4.2	3.8	3.4									22
4.4	4.2	4.0	3.5	3.0								23
4.2	4.0	4.0	3.4	3.0								24
4.2	3.9	5.9	5.2	3.4	2.2							25
4.0	5.0	G	G	3.0								26
4.2	4.2	4.0	4.4	3.2								27
4.4	4.2	4.0	3.5	3.1								28
B	B		3.8	3.1				1.5				29
	4.4	C	C							1.8	1.8	30
4.4	4.2	4.0	3.7	3.0	2.4							31
27	29	29	30	27	15	..	..	1	1	1	2	Count
4.2	4.0	3.8	3.4	3.0	2.3	..	..	..	..	..	..	Median
4.2	4.1	3.9	3.5	3.1	2.3	..	..	..	..	..	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : March 1960

TABLE 28  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	1.8	1.9	1.3	1.6	1.7	1.3	2.1	1.9	1.9	2.5	2.5	2.5
2	1.8	1.4	1.3	E	E	1.2	1.6	1.5	1.8	2.1	2.3	2.5
3	1.4	1.5	1.2	1.3	1.2	1.2	1.6	1.6	2.1	2.4	2.5	2.5
4	1.6	1.3	1.2	1.4	1.5	1.3	1.7	1.6	1.9	2.3	2.5	2.8
5	1.1	E	1.1	1.2	1.2	1.1	1.5	1.6	1.9	2.3	2.4	2.7
6	1.7	1.3	1.5	1.4	1.2	1.7	1.6	1.6	1.9	2.3	2.3	C
7	1.3	1.2	1.2	1.0	1.1	1.6	1.9	2.1	2.0	2.3	2.3	2.7
8	1.6	1.3	1.5	1.7	2.2	2.4	2.1	1.9	1.8	2.3	2.4	2.6
9	1.3	1.5	1.3	1.4	1.2	1.2	1.3	1.6	2.0	2.7	2.4	2.7
10	1.3	1.3	1.5	1.4	1.3	1.3	1.7	1.6	2.0	2.2	2.4	2.6
11	1.2	1.2	1.3	1.4	1.3	1.8	1.7	1.5	1.7	2.2	2.4	2.5
12	1.5	1.4	1.3	1.2	1.5	1.6	1.8	1.6	1.9	2.4	2.4	2.8
13	1.6	1.7	1.6	1.5	1.5	1.6	1.7	1.5	2.0	C	C	C
14	1.3	1.5	1.5	1.2	1.4	1.5	1.6	1.7	2.0	2.4	2.6	2.8
15	1.1	1.0	1.1	1.3	1.2	1.2	1.8	1.8	2.0	2.5	2.6	2.8
16	1.6	1.0	1.3	1.1	1.4	1.4	1.6	1.5	2.0	3.6	3.0	2.8
17	1.2	1.0	1.1	1.5	1.1	1.2	1.9	1.7	1.8	2.3	2.6	2.7
18	1.3	1.7	1.3	1.3	1.3	1.5	1.7	1.6	1.9	2.4	3.1	3.4
19	1.3	1.2	1.3	1.4	1.5	1.4	1.9	1.9	2.1	2.6	2.5	3.0
20	1.4	1.1	1.0	E	1.4	1.2	1.8	1.9	C	C	C	C
21	1.5	1.4	1.3	1.1	1.4	1.4	1.3	1.8	2.2	2.4	2.7	2.6
22	1.5	1.5	1.4	1.4	1.4	1.6	2.0	1.6	2.2	2.3	2.6	2.7
23	1.6	1.4	1.3	1.2	1.7	1.5	2.2	1.8	2.1	2.5	2.6	2.8
24	1.4	1.3	1.1	1.4	1.6	1.5	2.0	1.9	2.2	2.5	2.6	3.0
25	1.0	1.1	1.4	1.0	1.2	1.3	1.8	1.7	2.0	2.4	2.4	3.0
26	1.2	1.2	1.2	1.2	U1.5C	1.3	2.0	1.6	2.2	2.4	2.5	2.6
27	1.3	1.3	1.3	1.2	1.4	1.4	2.0	2.3	2.2	2.3	2.6	3.4
28	1.4	1.3	1.2	1.4	1.5	1.7	2.2	1.9	2.4	2.8	2.8	3.2
29	1.4	1.1	1.1	1.2	1.3	1.5	2.2	2.4	2.6	3.0	3.8	3.4
30	1.4	1.3	1.4	1.6	1.4	1.7	2.0	2.2	2.7	3.2	3.6	3.8
31	2.1	1.3	1.4	1.5	1.4	1.3	1.9	1.9	2.6	2.8	2.9	2.8
Count	31	31	31	31	31	31	31	31	30	29	29	28
Median	1.4	1.3	1.3	1.3	1.4	1.4	1.8	1.7	2.0	2.4	2.5	2.8
Mean	1.4	1.3	1.3	1.3	1.4	1.4	1.8	1.8	2.1	2.5	2.6	2.8

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : March 1960

TABLE 28 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
2.7	2.7	2.7	2.4	2.1	1.7	1.7	u1.1s	1.4	1.4	1.3	1.7	1
2.7	2.6	2.5	2.7	2.2	1.9	1.9	1.2	1.6	1.3	1.6	1.3	2
2.7	2.5	2.4	2.4	1.9	2.0	1.6	1.3	1.4	1.3	1.4	1.4	3
2.6	2.7	2.4	2.2	1.9	1.6	1.6	1.2	E	1.2	1.3	1.2	4
2.7	2.7	2.5	2.7	2.4	2.2	1.8	1.1	1.2	1.3	1.4	1.3	5
2.6	2.7	2.6	2.4	2.0	1.7	1.6	1.1	1.3	1.3	1.3	1.2	6
2.8	2.7	2.5	2.2	1.9	2.0	1.7	1.3	1.4	1.5	1.8	1.4	7
2.6	2.5	2.6	2.2	1.9	2.0	1.7	1.4	1.5	C	1.3	1.4	8
2.7	2.6	2.5	2.3	2.0	1.6	1.6	1.3	1.3	1.3	1.5	1.2	9
2.6	2.7	2.3	2.3	2.0	1.7	2.0	1.4	1.5	1.4	1.6	1.7	10
2.6	2.6	2.6	2.4	2.4	2.0	1.8	1.4	1.5	1.5	1.4	1.2	11
2.7	2.6	2.4	2.6	2.2	2.3	1.9	1.5	1.5	1.6	1.7	1.4	12
C	C	2.4	2.4	2.0	1.9	1.7	1.5	1.5	1.6	1.5	1.7	13
3.0	3.0	2.6	2.6	2.2	2.4	1.9	1.5	1.5	1.0	1.5	1.5	14
2.8	2.7	2.6	2.6	2.3	2.0	1.7	1.4	1.6	1.5	1.6	1.7	15
3.4	3.0	2.6	2.6	2.2	2.1	1.8	1.7	1.6	1.6	1.2	1.1	16
2.8	2.7	2.6	2.5	2.1	2.0	1.7	1.4	1.6	1.6	2.0	1.6	17
3.6	3.3	3.0	2.5	2.1	2.2	1.7	1.3	1.5	1.5	1.6	1.4	18
2.8	2.9	2.6	2.6	2.3	2.2	1.7	1.6	1.6	1.4	1.6	1.4	19
C	3.0	2.8	2.5	2.3	1.9	1.7	1.3	1.5	1.6	1.4	1.3	20
2.8	3.0	2.8	2.6	2.5	u2.4s	1.8	1.6	1.5	1.5	1.6	1.6	21
2.8	2.8	2.6	2.6	2.5	2.4	1.8	u1.1s	1.5	1.6	1.6	1.8	22
2.7	2.7	2.6	2.6	2.4	2.2	1.8	1.4	S	1.4	1.4	1.4	23
2.8	2.9	2.6	2.3	2.2	2.3	2.0	1.4	1.4	1.4	1.4	1.3	24
2.9	3.0	2.6	2.5	2.1	1.9	1.7	1.2	1.5	1.6	1.4	1.3	25
2.5	2.7	2.7	2.4	2.1	2.2	1.8	1.3	1.4	1.5	1.5	1.1	26
3.0	4.2	3.6	2.6	2.2	2.2	1.8	1.5	1.5	1.4	1.4	1.3	27
3.2	3.2	2.8	2.6	2.4	2.4	1.8	1.3	1.3	1.7	1.3	1.4	28
6.6	6.6	5.0	4.2	2.6	2.2	1.8	1.2	1.3	1.2	1.5	1.5	29
3.6	3.6	3.0	C	2.6	2.4	1.7	1.3	1.3	1.4	E	1.1	30
3.2	3.0	3.0	2.5	2.0	1.6	2.0	1.7	2.2	1.8	1.7	1.5	31
29	30	31	30	31	31	31	31	30	30	31	31	Count
2.8	2.7	2.6	2.5	2.2	2.0	1.8	1.3	1.5	1.4	1.5	1.4	Median
3.0	3.0	2.7	2.5	2.2	2.0	1.8	1.4	1.5	1.4	1.5	1.4	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : March 1960

TABLE 28 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	1.7	1.6	1.4	1.2	1.1	1.4	2.3	2.1	2.3	2.3	2.5	2.5
2	1.6	1.3	E	1.2	1.3	1.4	2.1	1.6	2.0	2.1	2.5	2.6
3	1.3	1.6	1.6	1.3	1.2	1.3	2.1	2.1	2.3	2.4	2.4	2.7
4	1.2	1.3	1.4	1.2	1.3	1.3	1.6	1.8	2.2	2.4	2.6	2.7
5	1.2	1.3	1.1	1.2	E	1.1	1.9	1.9	2.2	2.4	2.5	2.7
6	1.3	1.3	1.3	1.3	1.3	1.3	1.7	1.7	2.2	2.3	2.4	2.6
7	1.2	1.2	1.1	1.3	1.1	2.0	1.8	1.7	2.2	2.3	2.6	2.7
8	1.5	1.4	1.3	1.8	2.2	2.3	2.4	1.6	2.2	2.3	2.4	2.5
9	1.3	1.2	1.4	1.1	1.2	1.2	1.6	1.7	2.2	2.5	2.5	2.6
10	1.5	1.3	1.3	1.5	1.6	1.3	1.5	1.8	2.1	2.3	2.4	2.6
11	1.5	1.1	1.2	1.4	1.6	1.6	1.7	1.5	1.8	2.2	2.4	2.6
12	1.3	1.5	1.5	1.4	1.5	1.4	2.4	1.7	2.2	2.3	2.4	2.7
13	1.5	1.4	1.4	1.3	1.4	1.4	1.7	1.7	C	C	C	C
14	1.5	1.3	1.4	1.3	1.5	1.5	1.7	1.8	2.2	2.4	2.6	2.7
15	1.2	1.3	1.1	1.1	1.1	1.4	1.7	1.7	2.4	2.4	2.6	3.0
16	1.3	1.0	1.2	1.2	1.6	1.3	2.2	1.6	2.5	3.0	3.0	3.0
17	1.1	1.1	1.1	1.1	1.2	1.1	2.2	1.8	2.1	2.4	2.7	2.8
18	1.6	1.2	1.4	1.4	1.4	1.4	1.7	1.7	2.2	3.0	3.2	3.3
19	1.4	1.4	1.4	1.3	1.4	1.3	1.8	2.0	2.4	2.6	2.8	3.0
20	1.3	1.1	E	1.2	1.4	1.2	1.7	C	C	C	C	C
21	1.5	1.4	1.4	1.3	1.5	1.3	1.8	2.0	2.3	2.4	2.7	2.8
22	1.5	1.6	1.7	1.4C	1.5	1.5	1.8	2.2	2.4	2.4	2.6	3.0
23	1.5	1.4	1.5	1.3	1.4	1.5	2.6	1.9	2.3	2.6	2.6	2.7
24	1.4	1.1	1.4	1.2	1.4	1.8	2.4	2.2	2.5	2.7	2.8	3.0
25	1.3	1.3	1.5	1.2	1.4	1.3	1.7	1.8	2.2	2.4	2.7	2.9
26	1.1	1.1	1.1	1.3	1.5	1.5	1.9	1.8	2.2	2.6	2.6	2.8
27	1.1	1.5	1.4	1.5	1.4	1.6	2.3	2.1	2.2	2.6	2.7	3.2
28	1.4	1.3	1.9	1.2	1.5	1.5	2.8	2.2	2.4	3.0	3.0	3.0
29	1.1	E	E	E	1.6	1.6	2.8	2.4	2.7	2.8	3.2	3.6
30	1.4	1.4	1.5	1.3	1.6	1.5	2.0	2.6	3.0	3.2	3.6	3.8
31	1.6	1.6	1.2	1.6	1.4	1.5	2.6	2.2	2.4	2.8	2.7	3.0
Count	31	31	31	31	31	31	31	30	29	29	29	29
Median	1.4	1.3	1.4	1.3	1.4	1.4	1.9	1.8	2.2	2.4	2.6	2.8
Mean	1.4	1.3	1.4	1.3	1.4	1.4	2.0	1.9	2.3	2.5	2.7	2.9

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin  
Unit : Mc  
Month : March 1960

TABLE 28 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.7	2.5	2.6	2.3	2.1	1.6	1.3	1.2	E	1.4	1.3	1.5	1
2.7	2.6	2.5	2.4	2.1	1.4	1.3	1.5	1.2	1.2	1.6	1.5	2
2.9	2.6	2.6	2.3	2.1	1.8	1.3	1.1	1.3	1.3	1.4	1.4	3
2.6	2.5	2.3	2.1	2.1	1.8	1.3	E	1.1	1.3	1.2	1.1	4
2.9	2.7	2.7	2.5	2.3	1.8	1.3	1.2	1.3	1.4	1.3	1.6	5
2.7	2.6	2.4	2.4	1.9	1.7	1.3	1.4	1.3	1.3	1.2	1.2	6
2.6	2.5	2.5	2.2	C	2.3	1.3	1.4	1.4	1.5	1.7	1.5	7
2.5	2.5	2.3	2.0	1.9	1.8	1.4	1.5	C	1.2	1.3	1.3	8
2.6	2.5	2.3	2.0	1.7	1.6	1.4	1.3	1.4	1.4	1.4	1.3	9
2.6	2.6	2.2	2.3	2.4	1.1	1.5	1.5	1.4	1.6	1.4	1.3	10
2.7	2.6	2.6	2.4	2.0	1.7	1.5	1.4	1.3	1.5	1.3	1.7	11
2.8	2.4	2.5	2.5	2.4	2.3	1.5	1.6	1.7	1.7	1.6	1.4	12
C	C	2.4	2.1	2.1	1.7	1.7	1.5	1.7	1.7	1.5	1.5	13
2.8	2.7	2.7	2.2	3.0	2.4	1.4	1.6	1.7	1.5	1.6	1.4	14
2.8	2.8	2.6	2.6	2.2	1.8	1.5	1.5	1.6	1.6	1.3	1.5	15
2.8	2.8	2.7	2.6	2.6	2.2	1.6	1.5	1.7	1.2	1.4	1.1	16
2.7	2.8	2.5	2.3	2.3	2.2	1.4	1.6	1.4	1.4	1.8	1.4	17
3.2	3.1	2.5	2.6	2.4	1.9	1.3	1.3	1.7	1.7	1.4	1.3	18
2.9	2.7	2.6	2.3	2.3	2.2	1.3	1.4	1.6	1.3	1.7	1.6	19
C	2.8	2.7	2.5	2.2	2.2	1.4	1.5	1.5	1.6	1.4	1.3	20
2.8	2.8	2.7	2.6	2.6	2.3	1.3	1.5	1.6	1.4	1.6	1.6	21
2.9	2.8	2.7	2.6	2.6	2.4	1.2	1.4	1.6	1.5	1.7	1.6	22
2.8	2.6	2.4	2.2	2.2	2.3	1.2	1.5	U1.6s	1.4	1.7	1.4	23
2.8	3.0	2.7	2.4	2.2	2.3	1.5	1.4	1.5	1.5	1.4	1.3	24
2.7	2.7	2.6	2.3	2.1	1.8	1.3	1.4	1.4	1.3	1.3	1.3	25
2.7	2.5	2.8	2.6	2.2	2.3	1.4	1.3	1.4	2.0	1.7	1.4	26
3.2	2.8	3.0	2.4	2.4	2.0	1.5	1.6	1.7	1.7	1.5	1.5	27
3.2	3.0	2.8	2.4	2.4	2.4	1.3	1.5	1.5	1.4	1.2	1.5	28
8.6	5.8	4.4	3.0	2.6	2.4	1.1	1.5	E	1.7	1.6	1.4	29
4.8	3.4	C	C	2.6	2.4	1.4	1.4	1.4	1.3	1.0	1.5	30
3.2	3.0	2.6	2.4	2.2	1.5	2.1	2.0	2.0	1.7	1.3	1.1	31
29	30	30	30	30	31	31	31	30	31	31	31	Count
2.8	2.7	2.6	2.4	2.2	2.0	1.4	1.5	1.4	1.4	1.4	1.4	Median
3.1	2.8	2.6	2.4	2.3	2.0	1.4	1.4	1.5	1.5	1.4	1.4	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : h'F2

Unit : Km

Month : March 1960

TABLE 29  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	L	L
2								L	L	L <sub>H</sub>	L <sub>H</sub>	L
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	L	L
6								L	L	L	L	C
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
31								L	L	L	L	L
Count								..	..	..	..	..
Median								..	..	..	..	..
Mean								..	..	..	..	..

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km

Month : March 1960

TABLE 29 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	L	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
												5
L	L	L	L	L	L							6
L	L	L	L	L	L							7
L	L	L	L	L	L							8
L	L	L	L	L	L							9
												10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
C	C	L	L	L	L							13
L	L	L	L	L	L							14
												15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
C	L	L	L	L	L							19
												20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
												25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
B	B	L	L	L	L							28
L	L	L	L	L	L							29
			C	L	L							30
L	L	L	L	L	L							31
..	..	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km

Month : March 1960

TABLE 29 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4							L	L	L	L	L	L
5								L	L	L	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8							L	L	L	L	L	L
9							L	L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16								L	L	L	L	L
17							L	L	L	L	L	L
18							L	L	L	L	L	L
19							L	L	L	L	L	L
20							L	L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25							L	L	L	L	L	L
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30							L	L	L	L	L	L
31								L	L	L	L	L
Count							..	..	..	..	..	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km

Month : March 1960

TABLE 29 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L	L	L							1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L								5
L	L	L	L	L								6
L	L	L	L	C								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L								11
L	L	L	L	L								12
C	C	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	L	L	L								16
L	L	L	L	L								17
L	L	L	L	L	L							18
C	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L								26
L	L	L	L	L								27
B	B	L	L	L								28
L	L	C	L	L								29
L	L	L	L	L								30
L	L	L	L	L								31
..	..	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F  
Unit : Km  
Month : March 1960

TABLE 30  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	230	220	235	250	F	F	300	250	220	215	210	200
2	220	235	255	300	360	280	240	240	230	205H	200	195
3	225	225	240	250	250	235	240	240	235	220	210	200
4	220	220	235	235	235	240	265	250	225	220	210	195
5	245	240	225	230	230	255	280	260	240	220	215	215
6	230	220	215	235	245	225	250	250	230	220	210H	C
7	215	220	U230F	260	245	240	255	240	220	220	205	200
8	225F	215	220	240	U240F	U250F	260	240	220	215	210H	200H
9	235F	225	U225F	225	260	270	300	245	230	230	210	200H
10	U225F	230	225	235	225	240	255	240	235	215	205	200
11	220	240	260	260	240	220	240	240	230	220	200	195
12	240	230	230	240	220	220	270	240	220	200	200	195H
13	220	220	205	220	220	225	260	240	220	C	C	C
14	220	230	220	220	230	220	260	240	230	215	205	200
15	220	235	240	220	220	220	250	240	220	215	200H	200H
16	235	240	260	275	240	205	245	235	230	220	215	210
17	240	245	260	275	260	225	C	230H	220	205	200	195H
18	225	215	225	225	230	215	240	235	210	205	210	200
19	235	235	215	215	215	220	245	235	215	210	200	190H
20	235	235	235	235	220	220	240	235	C	C	C	C
21	240	240	240	235	225	235	260	240	230	210	200H	200
22	225	220	220	225	235	225	260	245	230	215H	200H	200
23	240	230	230	220	220	220	265	235	225H	215H	200H	205H
24	240	240	220	220	220	220	260	240	220	U215A	205	205
25	270	275	300	280	240	205	245	240	210	215	200	200H
26	230	225	220	220	U220C	220	265	240H	225	210	205	200H
27	270	260	240	230	220	225	260	245	225	205H	200	200
28	240	240	240	230	220	230	255	240	220	210	210	205
29	240	260	260	260	240	210	260	240	235	220	220	215
30	240	240	230	225	230	210	240	235	230	225	205	220
31	260	310	300	240	270	250	260	255	240	220	220	220
Count	31	31	31	31	30	30	30	31	30	29	29	28
Median	235	235	230	235	230	225	260	240	225	215	205	200
Mean	235	235	235	240	240	230	260	240	225	215	205	200

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F  
Unit : Km.  
Month : March 1960

TABLE 30 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
200	195	195	200H	225	255	285	370	360	265	245	230	1
195	200	200	215	235	255	285	365	305	240	220	220	2
200	190	190	220	230	240	280	370	350	270	230	220	3
200	190	210	215	220	245	280	385	F	F	U300F	U225F	4
210	200	205	205	210H	260	300	F	F	280	240	230	5
200H	200H	200H	200H	230	255	290	415	U345F	U360F	255	220	6
200H	200H	200H	200	230	250	280	U410F	F	F	F	255	7
200	195	190H	200H	225	245	290	U440F	U440F	C	U275F	U240F	8
200	200	210	200H	220	245	280	370	U360F	U380F	U310F	U245F	9
195	190H	195	200	230	250F	285	U400F	F	F	U280F	U240F	10
200	200	200	200	220	240	280	320	280	240	235	240	11
200	200	210	200	210	250	280	380	410F	310F	280	220	12
C	C	200	200	240	260	280	380	440F	380F	280F	235	13
200H	200H	200H	220	220	250	280	400	U440F	U320F	U245F	230	14
200H	205	200	200	235	250	280	400	U440F	U310F	240	220	15
205	205	210	220	235	250	260	255	250	260	255	U260A	16
195	185H	200	205	225	245	280	380	U345F	290	300	235	17
205	200	195	195H	210H	245	280	370	F	U280F	275	250	18
205	200	200	200	210H	245	280	400	U400F	320	255	220	19
C	200	205	210	230	250	280	420	420	380	265	240	20
205	200H	195H	215	230	250	295	U480F	F	275	250	235	21
200	200	210	215	235	255	290	U400F	F	F	240	240	22
195	200H	200	215	215H	245	280	385	F	F	280	235	23
200	195H	210	220	225	250	290	420	U450F	F	U330F	275	24
205	205	U200A	A	U240A	250	285	F	F	U320F	280	240	25
210	205	215	215	230	260	295	U435F	F	F	F	260	26
200	210	220	U240A	A	260	300	420	350F	260	290F	240	27
200	200	210	220	230	255	300	460F	420F	330F	260	260	28
B	B	B	240	240	260	295	400F	420F	400F	280F	280F	29
210	210	200	C	240	260	300	440F	460F	320F	260	280	30
220	215	220	A	240	260	280	260	230	220	220	360	31
28	29	30	28	30	31	31	29	21	23	29	31	Count
200	200	200	210	230	250	280	400	400	310	260	240	Median
200	200	205	210	225	250	285	390	375	305	265	245	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F  
Unit : Km  
Month : March 1960

TABLE 30 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2' N  
Longitude : 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	230	225	225	275	F	U355F	260	240	210	215	200	200
2	230	240	275	325	340	240	240	240	220	205H	200	200
3	235	230	240	260	260	225	260	240	230	215	205	200
4	220	225	225	250	230	240	260	235	220	210	205	195
5	245	220	230	225	245	255	270	250	230	215	205	215
6	220	220	225	240	225	220	260	245	230	215	205H	200H
7	220	220	245	255	245	235	255	230	220	215	205	200H
8	U220F	215	U230F	235	245	U240F	255	230	220	215H	200H	195H
9	U230F	U220F	U230F	245	260	285	255	240	225	220	205	200
10	225	225	235	235	225	235	260	235	225	205	205	200H
11	240	250	255	240	240	220	260	230	220	210	200	210
12	240	240	240	230	220	220	255	220	210	200	200	195H
13	220	205	220	210	220	230	250	230	C	C	C	C
14	230	230	220	225	235	230	260	230	220	210	200	205
15	230	230	220	220	220	220	250	230	220	220	200H	200H
16	240	260	245	265	200	210	240	230	225	220	210H	205
17	240	250	270	255	250	210	240	220H	210	200	200	200
18	220	220	240	230	225	205	245	225	205	210	200	200
19	235	220	225	215	215	220	235	225	210	200H	195H	200
20	240	235	235	230	220	220	245	C	C	C	C	C
21	240	235	235	230	225	235	250	235	220	205H	210	200
22	220	220	215	235	225	220	255	235	215H	210H	200H	200H
23	230	230	225	225	210	230	250	225H	215H	205H	195H	195H
24	235	230	220	220	220	225	245	230	220H	210	205	200H
25	275	275	300	260	220	205	250	225	U200A	U200A	200H	200H
26	230	215	220	220	225	235	250	235	215	205	200	200
27	265	240	235	230	225	235	255	240	215	205	200	200
28	240	230	235	230	220	240	250	225H	220	210	210	200
29	250	245	260	220	220	250	245	230	220	220	210	B
30	240	240	225	220	210	220	240	230	225	210	220	205
31	280	320	280	240	260	245	260	245	240	230	220	210
Count	31	31	31	31	31	31	31	30	29	29	29	28
Median	235	230	235	230	225	230	250	230	220	210	200	200
Mean	235	235	240	240	235	235	250	235	220	210	205	200

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : h'F  
Unit : Km  
Month : March 1960

TABLE 30 (Contd.)  
Ionospheric Data  
75 0°E Mean Time

Latitude : 10.2° N  
Longitude : 77.5° E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
195	190	200	200H	250	265	320	370	305	240	230	220	1
195	200	200	230	240	255	320	340	260	220	220	220	2
195	200	210	225	235	260	320	365	305	240	225	220	3
195	200	210	220	225	260	320	F	F	F	U260F	240	4
215	210	215	210	235	275	340	F	325	255	240	230	5
200H	200H	200	205	A	270	270H	U405F	U320F	U280F	240	U215F	6
200H	195H	200	210	C	265	330	F	F	F	U260F	U240F	7
200	190H	200	200H	235	265	355	F	C	U270F	U270F	U240F	8
200	195H	200H	205	230	265	350	U350F	U380F	F	U280F	U225F	9
195H	195	195H	215H	240	265F	345	U400F	F	U320F	U270F	220	10
200	215	210	220	240	260	305	310	260	220	220	240	11
200	200	205	200H	240	260	340	U400F	395F	U260F	250	220	12
C	C	200	220	240	260	340	380F	420F	310F	U240F	220	13
200H	200H	200	220	240	260	340	F	U360F	300	240	220	14
200H	200	200	220	240	260	340	U400F	U360F	300	240	230	15
215	205	215	230	240	260	260	250	255	250	250	245	16
200	200H	210	210	240	255	320	400	315	310	270	235	17
205	200	190H	190H	240	255	315	F	U400F	280	275	235	18
200	195H	200	205	235	260	325	U420F	U345F	300	240	225	19
C	200	205	220	240	265	345	F	420	340	250	235	20
200	200H	220	215	240	275	365	F	F	260	240	230	21
210	200	215	220H	245	270	355	F	F	U280F	230	245	22
200	200	215	225	240	265	335	F	F	F	240	230	23
200H	195H	U210A	215	240	265	345	F	U420F	U380F	265	265	24
200H	200H	A	A	U245A	265	330	F	F	285	255	230	25
195H	A	210	230	245	275	360	U445F	F	F	U285F	265	26
200	220	220	A	240	275	360	F	F	270F	265	235	27
200	200	205	220	240	270	380	500F	440F	280	280	240	28
B	B	245	240	250	280	345	420F	420F	320F	260F	260	29
220	200	C	C	240	280	370	500F	420F	260F	280	260	30
220	220	230	240	260	280	280	250	225	210	270	370	31
28	28	29	28	29	31	31	18	21	26	31	31	Count
200	200	205	220	240	265	340	400	360	280	250	235	Median
200	200	210	215	240	265	335	385	350	280	255	240	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : h'E

Unit : Km

Month : March 1960

TABLE 31  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2° N

Longitude : 77.5° E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								120	A	A	A	A
2								105 <sub>H</sub>	100	A	A	A
3								115	105	A	A	A
4								115	100	A	A	A
5								A	A	A	A	A
6								110	A	A	A	C
7								120	A	A	A	A
8								120	105	A	A	A
9								110	A	A	A	A
10								115	A	A	A	A
11								110	A	A	A	A
12								110	A	C	C	C
13								110	A	A	A	A
14								120	A	A	A	A
15								120	110	110	A	A
16								105	105	B	110	A
17								110	A	A	A	A
18								105	A	A	A	A
19								115	110	105	A	C
20								115	C	C	C	C
21								120	120	105	A	A
22								115	110	A	A	A
23								115	110	A	A	A
24								120	A	A	A	A
25								A	A	A	A	A
26								110	A	A	A	A
27								125	A	A	A	A
28								150	A	A	A	A
29								120	A	A	B	A
30								120	115	A	A	A
31								F	A	110	A	A
Count								28	11	4	1	..
Median								115	110	..	..	..
Mean								115	110	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E  
Unit : Km  
Month : March 1960

TABLE 31 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A	A							1
A	A	A	A	A	A							2
A	A	A	A	110	A							3
A	A	A	A	A	A							4
A	A	A	A	A	A							5
A	A	A	A	A	A							6
A	A	A	A	A	A							7
A	A	A	A	A	A							8
A	A	A	A	A	A							9
A	A	A	A	A	A							10
A	A	A	110	110	115							11
A	A	A	A	105	120							12
C	C	A	110	110	120							13
A	A	A	A	110	120							14
A	A	A	105	115	120							15
115	A	A	A	A	120							16
A	A	A	A	A	110							17
A	A	A	A	A	A							18
A	A	A	A	A	120							19
C	A	A	A	110	A							20
A	A	110	115	110	120							21
A	A	115	110	120	120							22
A	105	A	A	120	A							23
A	A	A	A	A	A							24
A	A	A	A	A	A							25
A	A	115	115	115	A							26
A	B	A	A	A	A							27
A	A	110	A	115								28
B	B	B	B	110	115							29
A	B	A	C	120								30
A	A	120	A	A								31
1	1	5	6	14	11							Count
..	..	115	110	110	120							Median
..	..	115	110	115	120							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E  
Unit : Km  
Month : March 1960

TABLE 31 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2' N  
Longitude : 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								115	A	A	A	A
2								105	A	A	A	A
3								110	A	A	A	A
4							125	105	A	A	A	A
5							A	A	A	A	A	A
6							130	A	A	A	A	A
7							130	105	A	A	A	A
8								105	A	A	A	A
9							110	A	A	A	A	A
10							125	A	A	A	A	A
11							110	110	A	A	A	A
12								110	A	A	A	A
13							120	105	C	C	C	C
14							120	A	A	A	A	A
15							120	110	110	A	A	A
16								105	105	115	A	A
17								105	A	A	A	A
18							125	100	A	A	A	A
19							120	110	105	A	A	A
20							120	C	C	C	C	C
21							120	120	110	110	A	A
22							120	120	A	A	A	A
23								110	A	A	A	A
24								A	A	A	A	A
25							120	A	A	A	A	A
26							130	A	A	A	A	A
27								A	A	A	A	A
28								110	A	A	A	A
29								110	A	A	A	A
30							120	120	A	110	A	A
31								110	110	A	A	A
Count							17	21	5	3	..	..
Median							120	110	110	..	..	..
Mean							120	110	110	..	..	..

Sweep 1-0 Mc. to 25-0 Mc. in 27 seconds.

Characteristic : h'E  
Unit : Km  
Month : March 1960

TABLE 31 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2' N  
Longitude : 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	A	A	A	A							1
A	A	A	A	A	A							2
A	A	A	A	A	A							3
A	A	A	A	A	A							4
A	A	A	A	A	A							5
A	A	A	A	A	A							6
A	A	A	A	A	A							7
A	A	A	A	A	A							8
A	A	A	A	A	A							9
A	A	A	105	A								10
A	A	110	A	110								11
A	A	A	110	120								12
C	C	A	110	120								13
A	A	A	110	B								14
A	A	A	110	120								15
A	A	A	A	120								16
A	A	A	A	115								17
A	A	A	A	A	135							18
A	A	A	A	A								19
C	A	A	110	110								20
A	A	110	115	A								21
A	A	A	115	120								22
A	A	A	A	120								23
A	A	A	A	A								24
A	A	A	A	A								25
A	A	115	115	110								26
110	A	110	A	A								27
A	A	A	110	110								28
B	B	B	120	110								29
B	A	C	C	120								30
A	A	A	A	A								31
1	..	4	11	13	1							Count
..	..	..	110	120	..							Median
..	..	..	110	115	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : March 1960

TABLE 32  
Ionospheric Data  
75°0'E, Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	100							G	100	100	100	100
2					110			G	100	100	100	100
3			110					G	100	100	100	100
4								G	100	100	100	100
5						120		120	100	100	100	100
6								105	100	100	100	C
7						100		G	100	100	100	100
8				105	110			G	100	100	100	100
9						100	G	100	100	100	100	100
10								G	100	100	100	100
11		100	110	110	100			100	100	100	100	100
12								100	100	100	100	100
13								100	100	C	C	C
14								105	100	100	100	100
15								G	100	100	100	100
16								G	G	120	95	100
17	105	110						G	100	100	100	100
18								G	100	100	100	100
19								G	125	100	100	100
20			105	100				G	C	C	C	C
21								105	100	100	100	100
22								G	100	100	100	100
23								G	100	100	100	100
24								100	100	100	100	100
25	110		115					100	100	100	100	100
26								100	100	100	001	100
27	130							100	100	100	100	100
28	105		100					G	100	100	100	100
29		105			100			100	100	100	100	100
30								G	120	100	100	95
31		120						100	100	100	100	100
Count	5	4	5	3	4	3	..	14	29	29	29	23
Median	105	..	110	..	..	..	..	100	100	100	100	100
Mean	110	..	110	..	..	..	..	100	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : March 1960

TABLE 32 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
100	100	100	100	100	100					120		1
100	100	100	100	100	100							2
100	100	100	100	100	100							3
100	100	100	100	100	100	95						4
100	100	100	100	100	100							5
100	100	100	100	100	100							6
100	100	100	100	100	100							7
100	100	100	100	100	105				C			8
100	100	100	100	100	105							9
100	100	100	100	100	100							10
100	100	100	100	100	100							11
100	100	100	100	100	105							12
C	C	100	100	100	100							13
100	100	100	100	100	100				120			14
100	100	100	100	100	100							15
G	100	100	100	100	105				120	105	105	16
100	100	100	100	100	100							17
100	100	100	100	100	100							18
100	100	100	100	100	100							19
C	100	100	100	100	105							20
100	100	100	100	100	100							21
100	100	100	100	100	120							22
100	100	100	100	100	100							23
100	100	100	100	100	100							24
100	100	100	100	100	100							25
100	100	105	G	G	100							26
100	100	100	100	100	100						105	27
100	100	100	100	100	100							28
B	B	100	100	100	100				110		110	29
100	100	100	C	100	115					120	115	30
100	100	100	100	100	100					120		31
27	29	31	29	30	31	1	..	..	3	4	4	Count
100	100	100	100	100	100	..	..	..	..	..	..	Median
100	100	100	100	100	100	..	..	..	..	..	..	Mean

Sweep 1.0 Mc, to 25.0 Mc, in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : March 1960

TABLE 32 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1					110			G 140	100	100	100	100
2								G	100	100	100	100
3			110				G	100	100	100	100	100
4					120	115	G 120	100	100	100	100	100
5												
6							G	100	100	100	100	100
7							G	100	100	100	100	100
8					110			100	100	100	100	100
9							G	100	100	100	100	100
10							G	100	100	100	100	100
11	100	100	105	100	100		G	100	100	100	100	100
12							G	100	100	100	100	100
13							G	100	C	C	C	C
14							G	100	100	100	100	100
15							G	100	100	100	100	100
16								G	G	95	100	100
17	105							100	100	100	100	100
18							135	100	100	100	100	100
19							125	G	100	100	100	100
20			100	105			130	C	C	C	C	C
21							G	G	100	100	100	100
22							G	G	100	100	100	100
23				105				100	100	100	100	100
24								100	100	100	100	100
25	110						G	100	100	100	100	100
26							G	100	100	100	100	100
27	120							100	100	100	100	100
28								G	100	100	100	100
29		105		100				100	100	100	100	95
30							G	G	100	100	100	95
31	120	120							100	100	100	100
Count	5	3	3	4	4	1	4	21	28	29	29	29
Median	110	..	..	..	..	..	..	100	100	100	100	100
Mean	110	..	..	..	..	..	..	100	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es  
Unit : Km  
Month : March 1960

TABLE 32 (Contd.)  
Ionospheric Data  
75.0 E Mean Time

Latitude : 10.2° N  
Longitude : 77.5° E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
100	100	100	100	100	100							1
100	100	100	100	100	100							2
100	100	100	100	100	110							3
100	100	100	100	100	110							4
100	100	100	100	100	100							5
100	100	100	100	100	110							6
100	100	100	100	C				C				7
100	100	100	100	100	110							8
100	100	100	100	100	105							9
100	100	100	100	100	100							10
100	100	100	100	100	110							11
100	100	100	100	100	105							12
C	C	100	100	100	120							13
100	100	100	100	100	110							14
100	100	100	100	100	110							15
100	100	100	100	100	105				115	115	110	16
100	100	100	100	100	105				105			17
100	100	100	100	100	105							18
100	100	100	100	100	105							19
C	100	100	100	105	110			115				20
100	100	100	100	100								21
100	100	100	100	100	120				115	120		22
100	100	100	100	100	120							23
100	100	100	100	100	115							24
100	100	100	100	100	110							25
100	100	G	G	105	115							26
100	100	100	100	100							110	27
100	100	100	100	100								28
B	B	100	100	100				105				29
100	100	C	C	110	120					120	120	30
100	100	100	100	100	100							31
28	29	29	29	30	26	..	..	2	3	3	3	Count
100	100	100	100	100	110	..	..	..	..	..	..	Median
100	100	100	100	100	110	..	..	..	..	..	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : (S) (M 3000) F2

Unit : ...

Month : March 1960

TABLE 33  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2' N.

Longitude : 77°5'E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	3·10	F	3·05	3·30	F	U2·70F	2·70H	3·05	2·95	2·50	2·30	2·40
2	3·05	3·00	3·00	2·80	2·60	2·80	3·10	3·15	3·10	2·80	2·35H	U2·35W
3	3·10	3·20	U3·35s	3·00	3·10	3·00	3·25	3·10	2·90	2·65	2·45	2·30
4	3·05	3·20	3·15	U3·20s	3·25	3·15	3·00	3·00	2·75	2·45	2·40	2·30
5	Fs	Fs	Fs	F	3·20	F	2·95	2·85	2·65	2·35	2·30	2·30
6	3·05	3·10	3·20	U3·05F	3·05	3·25	3·05	2·90	2·40	2·45	2·50	C
7	3·10	3·10	F	U2·95s	U3·05F	3·10	3·10	3·05	2·85	2·45	2·20	2·35
8	F	U3·10F	3·20F	3·20	U3·25F	F	U3·10F	3·10	2·80	2·40	2·35	2·35
9	F	U3·10F	3·10F	3·15	3·00	3·00	2·75	2·95	2·65	2·50	2·45	2·25
10	U3·10F	2·95	3·05	3·10	3·10	3·15	3·15	3·00	2·70	2·40	2·45	2·35
11	F	3·05	F	F	3·20	3·30	3·05	2·80	2·60	2·50	2·30	2·50
12	3·05	3·10	3·10	3·20	3·40	3·55	3·00	2·95	2·60	2·45	2·45	2·40
13	F	F	3·30F	F	F	U3·30F	U3·10s	3·10	2·70	C	C	C
14	F	F	3·25	F	U3·20s	3·35	F	U3·00Fs	U2·70R	2·35	2·40	2·50
15	U3·05s	F	F	3·30	3·30	U3·40s	3·25	U3·25s	U3·00s	2·65	U2·35R	2·35
16	3·10	3·05	2·90	2·80	F	3·50	3·15	U3·35s	3·15	3·00	2·85	2·60
17	2·90	2·95	2·90	2·90	2·70	3·10	3·30	3·30	3·00	2·70	2·40	2·20
18	F	3·15	3·10	3·10	U2·95F	U3·25F	3·20	3·20	2·85	2·35	2·55	2·35
19	U3·10F	3·10	U3·30F	F	F	F	F	3·25	3·10	2·80	2·40	2·10
20	3·10	F	U3·15s	3·05	U3·10F	3·20	3·20	3·05	C	C	C	C
21	3·10	3·20	U3·30F	3·20	U3·30s	3·50	3·15	3·25	2·95	2·60	2·25	2·30
22	3·15	3·25	3·40	3·25	3·15	3·40	3·20	3·15	3·00	2·60	2·35	2·40
23	F	U3·00s	3·10	3·30	3·35	3·40	3·15	3·15	2·90	2·55	2·25	2·45
24	2·90	F	F	3·40	U3·40F	3·40	3·10	U3·10s	2·60	2·30	2·50	2·35
25	F	F	2·90	F	F	F	3·30	2·85	RH	2·50	2·40	2·40
26	F	U3·30F	F	F	3·40	3·50	3·10	3·05	2·65	2·35	2·35	2·40
27	F	F	3·20	U3·20F	U3·35F	U3·50SF	3·05	3·15	2·80	2·20	2·40	2·45
28	F	3·20	F	F	F	3·50	3·15	3·15	U2·95s	2·55	2·15H	2·35
29	Fs	U3·10Fs	Fs	U3·10Fs	F	F	3·10F	3·10	2·80	2·40	2·30	2·35
30	F	F	F	F	F	F	3·30	U3·20s	3·10	2·80	2·20H	2·40
31	F	F	F	3·10F	3·00	3·05	U2·95s	2·90	2·60	2·25	2·20	2·40
Count	16	20	21	22	23	25	29	31	29	29	29	28
Median	3·10	3·10	3·15	3·10	3·20	3·30	3·10	3·10	2·80	2·50	2·35	2·35
Mean	3·05	3·10	3·15	3·10	3·15	3·25	3·10	3·10	2·80	2·50	2·35	2·35

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : (S) (M3000) F2

Unit : ...

Month : March, 1960

TABLE 33 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
2.30	2.25	2.30	2.30	2.35	2.30	2.25	2.20	2.25	2.55	2.80	3.00	1
2.30	2.30	2.15	2.30	2.35	2.30	2.30	2.10	2.30	2.70	3.00	3.05	2
2.25	2.25	2.35	2.35	2.40	2.40	2.30	2.05	2.05	U2.25F	U2.80s	2.90	3
2.30	2.35	2.35	2.25	2.30	2.30	2.20	U2.10R	F	F	F	F	4
2.25	2.35	2.40	2.45	2.40	2.30	2.20	F	U2.10F	F	2.65	2.75	5
2.35	2.30	2.30	2.30	2.35	2.35	2.25	2.00	2.15	F	2.75	F	6
2.35	2.30	2.30	2.30	2.30	2.25	2.25	2.10	F	F	F	F	7
2.45	2.40	2.30	2.25	2.20	2.30	2.20	1.95	F	C	F	F	8
2.30	2.30	2.20	2.20	2.25	2.30	U2.25s	2.15	U2.30F	F	F	F	9
2.35	2.30	2.30	2.30	2.45	2.50	2.30	U2.05F	F	F	F	F	10
2.40	2.35	2.45	2.50	2.45	2.40	2.20	U2.20R	U2.20RS	U2.50s	2.75	2.95	11
2.45	2.40	2.40	2.45	2.40	2.35	U2.20R	U2.05F	F	F	F	Fs	12
C	C	2.40	2.40	2.40	2.40	2.35	U2.10s	F	F	F	F	13
2.40	2.45	2.30	2.35	2.45	U2.55s	2.40	U2.15s	F	F	F	F	14
2.30	2.30	2.35	2.30	2.40	2.40	2.40	U2.30s	F	F	F	F	15
2.55	2.45	2.30	2.10	2.15	2.35	2.45	2.60	2.70	2.70	2.75	2.75	16
2.35	2.35	2.35	2.35	2.35	2.40	2.30	2.10	2.25	F	F	Fs	17
2.45	2.35	2.35	2.35	2.30	2.30	2.15	2.10	F	F	F	F	18
2.35	2.35	2.30	2.30	2.35	2.40	2.35	2.15	U2.00F	2.30	U2.70F	F	19
C	2.30	2.35	2.40	2.35	2.30	2.15	2.00	F	F	F	F	20
2.40	2.40	2.40	2.50	2.50	2.35	U2.10s	F	F	U2.45s	2.50	F	21
2.40	2.40	2.40	2.45	2.35	2.25	U2.05R	2.00	F	F	F	U2.80F	22
2.50	2.45	2.45	2.45	2.40	2.35	2.15	U1.85W	F	F	F	F	23
2.40	2.30	2.30	2.40	2.40	U2.30R	U2.20s	U2.00Fs	F	F	F	F	24
2.40	2.30	2.30	2.40	2.50	2.50	2.35	U2.10Fs	F	F	F	F	25
2.35	2.40	2.50	2.55	2.60	2.60	U2.45s	F	F	F	F	F	26
2.30	2.30	2.30	2.35	2.40	2.45	2.40	2.10F	F	F	F	U3.00s	27
2.35	2.30	2.35	2.40	2.35	2.40R	2.20	1.90	F	F	F	F	28
2.30	2.30	2.35	2.40	2.35	2.30	U2.20s	2.00	F	F	F	F	29
2.35	2.35	2.30	C	2.40	2.50	2.40	U2.05F	F	F	F	F	30
2.35	2.30	2.30	2.35	2.30	2.20s	2.10	2.55	2.90	3.00	3.05	2.50s	31
29	30	31	30	31	31	31	28	11	8	10	9	Count
2.35	2.30	2.35	2.35	2.35	2.35	2.25	2.10	2.25	U2.50	2.75	2.90	Median
2.35	2.35	2.35	2.35	2.35	2.35	2.25	2.10	2.30	U2.55	2.80	2.85	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : ( $\Sigma$ ) (M 3000) F2

Unit : ...

Month : March 1960.

TABLE 33 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	F	3.00	3.25	F	U2.80F	U2.65F	3.05	3.00	2.70	2.30	2.25	2.30
2	3.00	3.05	2.90	2.75	2.70	3.00	3.15	3.10	2.95	2.60	2.10	2.30
3	3.10	3.25	3.15	3.05	2.95	3.10	3.15	3.05	2.85	2.55	2.40	2.30
4	3.15	U3.25s	3.15	3.05	3.20	3.20	U3.10s	2.90	2.55	2.30	2.50	2.20
5	Fs	Fs	U3.00s	3.15	3.10	U3.10s	2.95	2.75	2.55	2.30	2.30	2.30
6	3.10	3.10	3.10	3.05	3.10	3.35	3.00	2.70	2.55	2.30	2.35	2.40
7	3.10	U3.10s	U2.95F	U3.00F	3.00	U3.15s	3.05	3.00	2.65	2.30	2.35	2.35
8	F	U3.30F	3.10	3.15	F	F	3.10	2.95	2.60	2.30	2.30	2.40
9	F	U3.05F	F	3.05	3.00	2.85	2.55H	2.85	2.55	2.50	2.35	2.25
10	3.05	3.00	3.10	3.10	3.20	3.25	3.05	2.85	2.50	2.40	2.40	2.30
11	F	U3.05s	F	3.20	3.25	3.25	3.05	2.65	2.60	2.40	2.50	2.45
12	3.10	3.15	3.10	3.20	3.40	3.60	3.10	2.80	2.50	2.50	2.50	2.40
13	F	F	F	F	J3.25F	C	U3.20s	2.90	C	C	C	C
14	F	J3.40F	F	U3.20F	J3.30s	U3.30F	U3.20F	U2.90Fs	2.45	2.45	2.40	2.40
15	U3.10s	U3.15s	F	U3.30s	3.30	U3.25s	3.25	3.20	2.85	2.40	2.30	2.30
16	3.05	2.90	2.95	2.90	F	3.50	3.35	3.30	3.05	2.95	2.75	2.60
17	2.95	2.90	2.85	2.85	2.90	3.35	3.30	3.15	2.90	2.60	2.25	2.30
18	3.15	U3.05s	3.05	3.05	U3.05F	3.45	3.20	3.00	2.60	2.25	2.40	2.60
19	3.10	3.15	F	F	F	F	3.25	3.20	3.00	2.60	2.10	2.30
20	3.10	F	3.10	3.05	3.15	3.25	3.15	C	C	C	C	C
21	3.10	F	F	3.30	3.35	F	3.20	3.10	2.80	2.45	2.25	2.35
22	3.20	3.25	3.30	3.20	3.40	3.50	3.20	3.10	2.80	2.35	2.45	2.35
23	U3.05F	F	3.40	F	3.40	2.30H	3.30	3.05	2.70	2.25	2.45	2.50
24	F	F	3.40	F	3.35	3.30	3.10	2.95	2.40	2.35	2.40	2.35
25	F	U3.00F	F	3.10	3.30	U3.20Fs	3.20	2.40	2.50	2.50	2.40	2.40
26	F	3.30	F	3.25	3.50	3.45	3.15	2.85	2.40	2.30	2.35	2.40
27	F	F	F	U3.20F	U3.20F	U3.30F	3.10	3.00	2.60	2.40	2.35	2.50
28	F	F	F	3.20F	3.45	2.50H	3.25	3.05	2.70	2.30	2.30	2.35
29	F	Fs	F	F	F	3.40F	3.10	3.00	2.65	2.10H	2.40	2.30
30	3.10	3.20	F	F	F	F	3.30	3.20	2.95	2.50	2.10H	2.35
31	F	F	F	3.00	3.00	3.05	2.95	2.80	2.45	2.15	2.25	2.30
Count	17	21	17	25	26	26	31	30	29	29	29	29
Median	3.10	3.10	3.10	3.10	3.20	3.25	3.15	3.00	2.60	2.40	2.35	2.35
Mean	3.10	3.10	3.10	3.10	3.20	3.20	3.15	2.95	2.65	2.40	2.35	2.35

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (F) (M3000) F2

Unit : ...

Month : March, 1960

TABLE 33 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.20	2.25	2.30	2.35	2.35	2.25	2.20	U2.25s	2.35	2.65	2.95	3.15	1
2.30	2.20	2.20	2.35	2.35	2.30	2.10	2.15	2.40	2.80	3.00	3.10	2
2.20	2.30	2.35	2.40	2.40	2.30	2.15	2.05	2.10	2.45	U2.80F	3.00	3
2.30	2.35	2.30	2.30	U2.35s	2.25	U2.30s	U2.00F	F	F	F	Fs	4
2.30	2.40	2.45	2.45	2.40	2.30	2.00	F	2.25	U2.50F	2.80	3.05	5
2.35	2.30	2.25	2.30	2.30	2.35	2.15	F	2.30	U2.80F	F	F	6
2.30	2.30	2.30	2.30	C	2.25	U2.25s	U2.00F	F	F	F	F	7
2.45	2.30	2.30	2.20	2.30	2.25	2.10	F	C	U2.70F	F	F	8
2.30	2.30	2.20	2.30	2.25	2.20	2.10	2.25	U2.50F	F	F	F	9
2.35	2.30	2.30	2.45	2.50	2.45	2.25	F	F	F	F	F	10
2.40	2.40	2.45	2.50	2.40	U2.35R	J2.15R	U2.20SF	U2.30s	2.70	2.90	3.00	11
2.40	2.45	2.40	2.50	2.40	2.30	U2.20s	F	F	F	F	F	12
C	C	2.35	2.40	2.40	2.40	U2.20s	2.10	F	F	F	2.90	13
2.40	2.40	2.35	2.40	2.50	U2.50s	2.25	F	F	F	F	F	14
2.30	2.30	2.35	2.30	2.40	U2.45s	2.25	F	F	F	F	3.10	15
2.50	2.35	2.20	U2.10R	2.25	2.40	2.50	2.65	2.70	2.70	2.75	2.85	16
2.35	2.30	2.35	2.35	2.35	2.35	2.20	U2.00F	C	F	F	2.90	17
2.40	2.30	2.40	2.30	2.30	U2.25s	2.10	F	F	F	F	F	18
2.35	2.35	2.30	2.30	2.35	2.40	2.25	2.15	2.25	F	U2.85F	F	19
C	2.30	2.40	2.35	2.35	2.20	2.00	F	F	F	F	Fs	20
2.35	2.35	2.45	2.50	2.45	2.25	U2.05W	U1.95F	U2.35s	2.50	2.80	U3.00s	21
2.40	2.40	2.40	2.45	2.30	2.10	U1.95RW	F	F	F	F	F	22
2.40	2.45	2.45	2.45	2.40	2.35	U2.10s	F	F	F	F	Fs	23
2.30	2.35	2.40	2.45	2.30	2.30	2.05s	F	F	F	F	F	24
2.35	2.30	2.25	2.50	2.50	2.45	J2.25s	F	F	F	F	F	25
2.40	2.45	2.55	2.60	2.60	U2.55s	2.25	F	F	F	F	F	26
2.30	2.30	2.30	2.40	2.40	2.50	2.25	F	F	F	F	F	27
2.40	2.30	2.30	2.40	2.35R	2.40R	2.10s	F	F	F	F	F	28
2.45	2.30	2.35	2.40	2.35	2.20	U2.05s	F	F	F	F	F	29
2.35	2.35	C	C	2.50	2.50	2.25	F	F	F	F	F	30
2.30	2.30	2.35	2.40	2.25	2.10	2.30	2.80	3.00	3.20	2.70s	2.30	31
29	30	30	30	30	31	31	13	11	10	9	11	Count
2.35	2.30	2.35	2.40	2.35	2.30	2.20	2.15	2.35	2.70	2.80	3.00	Median
2.35	2.35	2.35	2.40	2.40	2.30	2.15	2.20	2.40	2.70	2.85	2.95	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF2

Unit : Mc

Month : April 1960

TABLE 34  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°2'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	7.0	5.5	4.3	4.1	E	E	5.5	11.0	11.2	9.3	13.6	U10.4R
2	C	C	C	C	C	C	C	C	C	C	C	13.4
3	13.3	11.7	9.7	6.9	4.0	E	6.3	9.9	10.8	13.3	13.5	13.6
4	12.7	12.2	11.5	10.5	9.8	6.5	6.9	10.5	12.4	13.2	11.8	10.8
5	U12.0F	U11.9F	U11.2F	F	F	F	F	10.5F	12.5	12.0	10.8	11.3
6	F	F	F	F	U7.7s	F	6.8	10.5	12.2	12.6	11.6	10.7
7	13.3	11.9	9.4	6.1	5.7	5.1	6.8	10.3	12.4	11.8	10.5	10.8
8	F	F	F	F	F	F	F	U11.7F	11.8	12.2	12.3	12.0
9	F	F	F	9.1	7.6	4.6	6.6	10.3	12.1	12.3	11.4	10.9
10	Fs	Fs	F	F	7.1	U3.5F	6.3	9.8	10.9	10.1	9.5	9.9
11	13.3	9.9	8.5	7.0	3.9	3.2	6.9	10.8	12.5	12.6H	10.6	10.5
12	F	U10.6F	U10.2F	9.8	8.8	7.2	7.7	10.1	12.1	12.8H	13.2H	11.6
13	U12.2F	12.1	F	F	F	3.9	6.8	10.0	10.8	10.6	10.1	9.7
14	F	F	9.4	8.2	6.5	4.5	7.3	10.4	11.8	13.0	13.6	U14.0RH
15	F	F	F	9.7	U9.7F	5.9	7.3	10.3	12.0	12.5	10.5	10.7
16	13.4	F	F	10.4	8.6	5.8F	7.3	10.5	12.3	13.1	R	11.8
17	11.2	10.6	9.6	C	8.7	6.9	8.2	11.4	12.9	13.4	13.2	12.1
18	U13.0s	F	U11.6s	11.3	9.8	9.6	10.7	12.4	13.8	11.8	11.2	10.8
19	11.0	10.7	9.0	8.5	7.8	6.2	8.2	10.9	12.6	13.2	RH	11.8
20	11.0	9.7	F	7.6	6.5	4.2F	7.2	10.2	11.8	11.9	11.3	11.1
21	F	F	8.6	F	7.4	5.4	7.4	10.6	11.7	11.8	11.1	11.2
22	C	C	C	C	C	C	C	C	U11.8s	12.0	10.8	10.8
23	F	U11.6s	F	10.0	U9.6Fs	F	U8.2F	10.0	12.0	11.7H	10.8	10.6
24	12.8	F	F	C	3.5	4.0	7.6	9.2	11.4	12.3	12.1H	WH
25	10.8	10.0	10.5	9.3	6.0	5.6	8.5	10.5	11.8	13.4	13.1	10.8
26	U11.5s	11.1	10.4	U9.7s	8.6	U6.1s	7.6	C	C	12.6	11.4	10.8
27	U11.6s	10.8	U10.8F	10.8	8.4	4.9H	7.0	10.6	11.4	11.5	10.6	10.4
28	11.0	9.8	7.6	3.8	3.0	E	7.0	10.8	10.6	11.0	13.8	12.7
29	11.2	U9.6s	8.4	8.3	8.1	7.4	9.4	U11.6s	13.0	13.4	11.6	11.7
30	11.4	U9.6s	10.0	11.0	6.8	2.8	7.2	10.2	U11.7s	12.6	C	C
Count	19	18	18	20	25	24	26	27	28	29	26	28
Median	11.6	10.6	9.6	9.2	7.6	5.0	7.2	10.5	11.8	12.3	11.4	10.8
Mean	11.8	10.5	9.5	8.6	7.2	5.4	7.0	10.6	11.9	12.2	11.7	11.3

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF2

Unit : Mc

Month : April 1960

TABLE 34 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
8.8	9.1	B	13.5	13.0	12.6H	10.8H	C	C	C	C	C	1
13.6	14.8	15.4	C	13.7	12.4	11.4	11.6	11.6	11.8	12.5	13.2	2
16.0	16.0	15.7	15.9	15.8H	14.8H	14.4R	14.6	14.4H	14.3	13.6	12.7	3
10.7	11.2	11.6	12.9	13.6	13.6	13.2	11.8	C	F	F	F	4
11.1	10.8	11.0	11.4	11.6	11.6	11.5	10.4	F	F	F	F	5
10.9	11.6	12.6	13.8	14.0	14.2	13.5	11.8	F	F	F	13.8	6
10.5	10.8	11.3	12.0	12.8	13.0	12.1	U9.8F	F	F	F	F	7
11.8	12.6	13.1	13.8	14.3	14.0	14.1	13.1	F	F	F	F	8
11.2	11.8	12.1	12.9	13.1	13.3	13.0	U11.4F	F	F	F	F	9
10.2	9.8	10.6	11.7	12.7	12.7	12.3	10.8	12.0	13.1	13.3	13.7	10
11.0	11.3	11.7	12.9	13.7	13.3	13.0	11.8	U11.0F	F	12.1	U12.0F	11
11.6	11.5	11.8	13.2	14.1	13.7	13.6H	12.4	12.2	13.3	13.3	13.2	12
11.2	11.9	12.9	13.7	13.6	13.4H	12.4	10.6	F	U11.0F	U12.8F	U13.0F	13
11.8	11.8	12.2	12.8	13.0	13.4	12.8	11.2	F	F	F	F	14
11.6	12.3	12.8	13.0	13.6	13.9	13.8	U12.8R	12.1	12.8	13.1	13.3	15
11.0	11.2	11.5	11.8	12.1	12.0s	11.6	10.4	F	F	F	F	16
11.8	12.3	12.5	12.8	12.9	12.8	12.7	11.0	F	F	F	F	17
10.8	11.6	12.5	12.8	12.8	12.4	10.2	U9.0F	8.5F	8.4	F	10.6	18
11.8	12.2	12.6	12.8	13.3	13.0	12.6	F	F	F	F	U11.8s	19
11.0	10.8	10.8	11.2	11.7	U11.7s	C	U9.2s	F	F	F	F	20
11.3	11.2	11.6	12.6	13.0	U12.0s	11.6	9.4	C	C	C	C	21
10.9	11.3	12.0	12.7	12.9	13.1	12.2	F	F	F	F	F	22
10.8	11.2	11.6	12.5	13.5	13.3	12.7H	10.9	F	F	F	F	23
10.6	9.8	10.4	11.6	12.1	12.4	12.6	C	C	11.6	12.5	12.4	24
10.5	11.7	12.3	13.0	13.1	C	12.8	U11.4s	F	11.0	U11.8Fs	12.4	25
10.6	10.6	11.0	11.6	13.0	U13.2R	12.4	Fs	U11.0F	F	F	F	26
10.6	11.1	12.0	13.1	13.8	14.0	13.2	11.8	11.2F	U11.2F	F	U11.4s	27
10.0	10.2	10.9	12.2	13.6	12.7	12.4	12.0	12.3	12.4R	C	11.6	28
11.8	11.7	12.0	13.0	13.0	U12.0s	11.2	U10.0s	10.6	11.0	U11.6s	U11.8s	29
12.0	11.8	11.3	11.6	11.4	11.4	U10.6s	9.0	8.4	U8.8F	12.5	U9.2SH	30
30	30	29	29	30	29	29	25	12	13	11	16	Count
11.0	11.4	12.0	12.8	13.0	13.0	12.6	11.2	11.4	11.6	12.5	12.4	Median
11.2	11.5	12.1	12.7	13.2	13.0	12.4	11.1	11.3	11.6	12.6	12.3	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF2

Unit : Mc

Month : April 1960

TABLE 34 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	6.6	4.7	4.4	3.0H	E	4.0	8.1	11.1	11.2H	10.1	U12.8R	9.6
2	C	C	C	C	C	C	C	C	C	C	13.1	13.4
3	13.0	11.0	8.7	5.5	2.7	3.4	7.9	10.3	12.3	13.7	13.2	14.8
4	12.6	12.0	11.1	10.2	8.6	4.9	8.9	11.6	13.2	12.8	11.2	10.6
5	F	F	F	F	F	F	8.5	11.7	12.6	10.9	11.0	11.3
6	F	F	F	F	F	F	8.9F	11.3	12.7	12.4	10.8	10.7
7	12.8	10.9	7.3	6.0	5.3	5.1	8.7	11.3	12.6	10.8	10.7	10.7
8	F	F	F	U9.6F	F	F	U11.5F	11.7	12.3	12.2	12.1	11.8
9	F	F	F	8.4	6.2	3.9	8.8	11.3	12.3	11.8	10.8	11.1
10	F	F	U9.9F	F	U5.5F	U3.3FH	8.3	10.8	10.6	9.7	9.6	10.2
11	12.3	9.2	8.0	5.4	3.5	4.4	9.1	12.0	12.7	12.0H	10.3	10.7
12	U11.0F	U10.7F	10.4	U9.2F	8.0	5.8	9.1	11.1	12.6	13.2H	12.2	11.4
13	U11.8F	11.8	F	F	5.1F	4.5	8.8	10.7	10.5	10.6	9.5	10.6
14	F	U10.2s	8.6	7.4	5.5	5.0	9.2	11.0	12.6	13.5	13.7	13.0H
15	F	F	F	9.8	7.3	5.1	8.9	11.4	12.5	12.0H	9.7	11.1
16	12.6	F	10.2	U9.7s	F	5.4	9.0	11.6	12.8	13.2	11.9	11.5
17	11.1	10.0	9.0	8.8	8.3	6.8	9.8	12.6	C	13.3	12.8	12.0
18	12.2	11.6	F	10.4	9.7	9.6	11.6	12.7	13.0	11.6	10.9	10.7
19	10.9	9.8	8.9	8.3	6.8	6.3	9.8	12.0	13.0	13.1	12.3	11.8
20	U11.1F	9.1	8.3	7.0	5.3	U4.4F	8.7	11.2	12.1	11.8	11.1	11.0
21	F	F	F	F	7.0	5.6H	9.2	11.2	11.8	11.5	11.2	11.2
22	C	C	C	C	C	C	C	C	12.0	11.7	10.8	10.8
23	F	F	F	F	F	F	9.4s	11.6	11.8H	10.9	10.7	10.6
24	F	F	8.7	C	3.6H	6.0s	8.4	10.2	12.2	12.0H	12.0H	11.1
25	10.2	10.4	10.8	7.4	5.5	6.5	9.9	10.8	12.6	13.3	12.4H	10.4
26	11.0	10.7	10.4	9.6	7.7	5.8	C	C	12.8	J12.4R	10.8	10.7
27	11.0	U10.8FS	F	10.2	7.2	5.0	9.0	11.0	11.6	11.0	10.6	10.4
28	10.2	8.8	5.3	3.0	2.9	4.5	9.2	11.2	10.0	13.0	13.5	12.0H
29	10.2	8.8	8.4	8.2	7.9	7.8	10.6	12.6	13.6	J13.2RH	11.5	11.8
30	10.6	U9.8s	10.6	9.0	4.8	4.8	9.2	11.0	12.0	13.2	C	12.8

Count	18	18	18	21	23	24	27	27	28	29	29	30
Median	11.0	10.3	8.8	8.4	5.8	5.0	9.0	11.3	12.4	12.0	11.2	11.1
Mean	11.2	10.0	8.8	7.9	6.1	5.3	9.2	11.4	12.2	12.1	11.5	11.3

Sweep 1.0 Mc, to 25.0 Mc. in 27 seconds,

Characteristic : fo F2

Unit : Mc

Month : April 1960

TABLE 34 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
U8.9WH	10.4	R	13.8	12.4	11.2H	10.6H	C	C	C	C	C	1
14.3	15.2	C	13.8	13.4	11.6	11.5	11.6	11.7	12.2	13.0	13.3	2
15.8	15.9	15.8	16.0H	15.6	14.8	14.6H	14.2H	14.2	13.8	12.7	12.4	3
10.9	11.5	12.2	C	13.7	13.4	12.7	C	F	F	F	F	4
10.9	10.8	11.2	11.6	11.9	11.6	11.2	U9.3F	F	F	F	F	5
11.0	12.0	13.2	14.2	14.0	13.8	12.9	F	F	F	F	13.4	6
10.7	11.0	11.6	12.4	12.9	12.7	11.4	F	F	F	F	F	7
12.0	12.6	13.4	14.4	14.2	14.0	13.8	F	F	F	F	13.5	8
11.7	12.0	12.7	13.0	13.1	13.3	12.7	F	F	F	F	Fs	9
9.9	10.5	11.3	12.3	12.8	12.6	11.6	11.3	13.0	13.1	13.6	13.6	10
11.2	11.4	12.3	13.4	13.6	13.0	12.6	11.2	U10.6F	11.6	U11.9s	F	11
11.5	11.5	12.6	13.7	13.8	13.7H	13.2	12.1	12.6	13.4	U13.1F	12.8	12
11.6	12.4	13.3	13.8	13.6	12.9	11.6	F	F	U12.2F	F	F	13
11.8	U11.8s	12.4	12.8	13.5	U13.2R	U11.6S	F	F	F	F	F	14
12.1	12.5	12.9	13.4	14.0	14.0	13.4	U12.3R	12.6	13.1	13.3	U13.4s	15
11.0	11.3	11.6	12.0	12.2	U12.0s	11.2	F	F	F	U10.6F	11.2	16
12.0	12.4	12.7	13.0	12.8	12.7	U11.8s	10.2	F	10.5	F	U12.9s	17
11.1	12.0	12.7	12.8	12.7	U12.0s	U10.0s	8.5F	F	F	U9.4F	10.8	18
11.9	C	12.6	13.0	13.4	12.8	U11.6s	F	F	F	U11.8F	F	19
10.8	10.8	10.8	11.4	11.7	11.5	10.5	F	F	F	F	12.7	20
11.2	11.3	12.0	12.8	12.6	12.0s	10.8	F	C	C	C	C	21
11.0	11.6	12.4	12.8	13.0	12.8	11.4H	F	F	F	F	F	22
11.0	11.2	11.8	13.0	13.6	13.0	12.0	F	F	F	F	F	23
10.2	9.8	11.0	11.8	12.0	12.6	12.3	C	C	12.1	12.8	11.8	24
11.0	12.0	12.7	13.1	13.1	C	12.6	F	U11.0F	F	U12.0s	U12.0s	25
10.6	10.7	11.2	12.4	13.4	12.8	12.2	U11.5F	F	F	F	U12.0s	26
11.0	11.6	12.8	13.4	14.0	13.8	12.6	11.4	11.0F	F	U11.4F	11.4	27
9.6	10.7	11.3	13.1	13.2	U12.3R	12.3	12.0	12.4	12.0	11.0	11.7	28
11.7	11.6	12.5	13.6	12.4	11.6	10.6	10.2	10.7	11.3	U11.8s	U12.0s	29
11.8	11.4	11.5	11.6	11.2	11.3	U9.5s	8.3F	S	U10.6s	9.0	11.2	30
30	29	28	29	30	29	30	14	10	12	15	18	Count
11.0	11.5	12.4	13.0	13.2	12.8	11.7	11.4	12.0	12.2	11.9	12.2	Median
11.3	11.7	12.3	13.0	13.1	12.7	11.9	11.0	12.0	12.2	11.8	12.3	Mean

Sweep 1.0 Mc, to 25.0 Mc, in 27 seconds.



Characteristic : foF1

Unit : Mc

Month : April 1960

TABLE 35

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									L	L	L	L
2								C	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5									L	L	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								C	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26								C	C	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	C	C
Count								..	..	..	..	..
Median								..	..	..	..	..
Mean								..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds,

Characteristic : foF1

Unit : Mc

Month : April 1960

TABLE 35 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	B	B	L								1
L	L	L	C	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
L	L	L	L	L	L							5
L	L	L	L	L	L							6
L	L	L	L	L	L							7
L	A	A	L	L	L							8
L	L	L	L	L	L							9
L	L	L	L	L	L							10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
u5.1L	L	L	L	L	L							21
L	L <sub>H</sub>	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
1	..	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF1

Unit : Mc

Month : April 1960

TABLE 35 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	L
2							C	C	C	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	L
12							L	L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16								L	L	L	L	L
17							L	L	L	L	L	L
18								L	L	L	L	L
19							L	L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22							C	L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26							C	C	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	C	L	L
Count							..	..	..	..	..	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : foF1

Unit : Mc

Month : April 1960

TABLE 35 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	B	L									1
L	L	C	L	L	L							2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L								5
												6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L <sup>H</sup>	L	L	L	L								11
L	L	L	L	L								12
L	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	L	L	L								16
L	L	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L								26
L	L	L	L	L								27
L	L	L	L	L								28
L	L	L	L	L								29
L	L	L	L	L								30
												Count
												Median
												Mean

Sweep 1·0 Mc, to 25·0 Mc, in 27 seconds.

Characteristic : foE

Unit : Mc

Month : April 1960

TABLE 36  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								2.5	A	A	A	A
2							C	C	A	C	C	A
3								2.8	A	A	R	B
4								2.8	A	A	A	A
5								B	B	B	B	B
6								2.7	A	A	A	A
7								A	A	A	A	A
8								A	A	A	A	A
9								2.8	A	A	A	A
10								A	A	A	A	A
11								2.7	A	A	A	A
12								2.8	A	A	A	A
13								A	A	A	A	A
14								2.8	3.4	A	A	A
15								U2.8R	A	A	A	A
16								A	A	A	A	A
17								2.8	A	A	A	A
18								3.0	A	A	A	A
19								U3.0RH	A	A	A	A
20								U2.9R	A	A	A	A
21								2.9	A	A	A	A
22							C	C	A	A	A	A
23								2.9H	A	A	A	A
24								2.8H	3.4RH	A	A	A
25								2.9	3.4R	A	A	B
26								C	C	A	A	A
27							R	A	A	A	A	A
28								A	U3.1R	A	A	A
29								2.6H	B	B	B	B
30								2.8	3.3	3.6	C	C
Count							..	19	5	1	..	..
Median							..	2.8	3.4	..	..	..
Mean							..	2.8	3.3	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE

Unit : Mc

Month : April 1960

TABLE 36 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
3.9	R	B	B	B								1
B	A	B	C	A	A							2
A	R	A	A	A								3
A	A	B	B	A								4
B	B	A	A	A								5
												6
A	A	3.7	3.6	A								7
A	A	A	A	A	A							8
A	A	U3.8R	3.5	A	A							9
A	A	A	3.5	B	A							10
		A	A	A	A							11
A	A	A	A	A								12
A	A	3.9	3.7	A	A							13
A	A	A	A	A								14
A	C	A	A	A	2.7							15
					2.7							16
A	A	A	A	A	A							17
A	A	A	A	A								18
A	A	A	A	A	F							19
A	A	A	A	A	U2.8R							20
				U3.6F	F							21
A	A	A	A	A								22
A	A	A	A	3.2								23
A	A	A	U3.8R	3.2								24
A	A	A	A	A								25
B	A	3.8	A	A	C							26
												27
A	A	A	A	A	A							28
A	A	A	A	2.9								29
B	A	A	A	A	A							30
A	A	A	A	A	A							30
1	..	4	5	4	3							Count
..	..	..	3.6	..	..							Median
..	..	..	3.6	..	..							Mean

• Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE  
Unit : Mc  
Month : April 1960

TABLE 36 (Contd.)  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							2.3	A	A	3.7	A	A
2							C	C	A	C	B	A
3								2.9	A	A	B	A
4								3.2	A	A	A	A
5								B	B	B	B	B
6								A	A	A	A	A
7								A	A	A	A	A
8							U2.4R	A	A	A	A	A
9								A	A	A	A	A
10							A	A	A	A	A	A
11								2.9	A	A	A	A
12								3.1	A	A	A	A
13								A	A	A	A	A
14							2.4	3.1	A	A	A	A
15								A	A	A	A	A
16							2.4	A	A	A	A	A
17							2.7	A	C	A	A	A
18							2.5	A	A	A	A	A
19							2.5H	U3.4F	A	A	A	A
20							2.5	A	A	A	A	A
21							2.5	A	A	A	A	A
22							C	C	A	A	A	A
23								A	A	A	A	A
24								2.8R	B	A	A	B
25								3.2	A	A	A	B
26							C	C	A	A	A	A
27							U2.3R	A	A	A	A	A
28								R	A	A	A	B
29							2.3H	B	B	B	B	A
30							2.4	3.0H	3.5	A	C	A
Count							12	9	1	1	..	..
Median							2.4	3.1	..	..	..	..
Mean							2.4	3.1	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE

Unit : Mc

Month : April 1960

TABLE 36 (Contd.)

Ionospheric Data

75° 0'E Mean Time

Latitude : 10° 2' N

Longitude : 77° 5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	B	B									1
B	A	C	A	A								2
A	3.8	A	A	A								3
A	A	A	C	2.9								4
B	B	A	A	A								5
A	A	A	3.4									6
A	A	A	A	A								7
A	A	3.7	3.4	A								8
A	A	U3.6R	3.2	R								9
A	A	A	U3.8R	A	A							10
A	A	A	A	A								11
A	A	B	A	A								12
A	A	3.8	A	A								13
A	A	A	A	B								14
A	A	A	A	2.8								15
A	A	A	A	A								16
A	A	A	A	A								17
A	A	A	A	A								18
A	C	A	A	A								19
A	A	A	A	A								20
A	A	A	A	A								21
A	A	A	A	F								22
A	A	3.9	3.5	2.8								23
A	A	A	A	A								24
B	B	A	A	A								25
A	A	A	A	A								26
A	A	A	A	A								27
A	A	A	3.3	R								28
A	A	A	A	A								29
A	A	A	A	A								30
..	1	4	6	3	..							Count
..	..	..	3.4	..	..							Median
..	..	..	3.4	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : foEs

Unit : Mc

Month : April 1960

TABLE 37

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								G	11.0	8.2	13.2	11.8
2	C	C	C	C	C	C	C	C	C	C	C	12.6
3		3.6						G	7.8	11.8	6.0	12.0
4	4.4							G	10.6	12.2	12.6	12.8
5	3.8					4.8		G	B	10.6	12.0	12.0
6								6.5	10.8	12.4	12.6	13.2
7		3.9		3.5				7.8	9.8	12.2	12.7	13.0
8	3.3							8.8	10.7	10.7	11.8	12.4
9	4.0							G	11.2	11.8	12.7	12.4
10								11.1	12.2	12.1	12.2	12.7
11				6.0				G	11.2	12.2	12.7	13.0
12				4.0				8.0	11.8	12.0	12.8	13.2
13								9.8	11.0	12.0	12.2	12.6
14						5.8		G	4.6	11.6	12.4	12.6
15		4.8	S	5.6	10.8			8.9	12.1	12.6	12.2	12.6
16	u5.8s							u9.0s	11.0	11.4	12.4	13.0
17				C	4.4			u8.0s	9.8	12.5	12.4	12.0
18								7.0	11.0	12.0	12.0	12.0
19								7.0	11.0	12.0	12.5	13.2
20	4.2							G	10.5	11.8	12.2	12.2
21								7.0	11.0	12.4	12.6	13.0
22	C	C	C	C	C	C	C	C	12.0	12.0	13.0	13.4
23								7.0	11.0	11.6	12.6	13.0
24				C				G	G	12.0	12.8	13.0
25						3.9		6.4	9.2	11.8	12.0	13.0
26								C	C	12.6	14.4	13.2
27							G	8.2	11.0	11.0	12.2	12.6
28								6.6	G	10.2	12.8	12.0
29								G	11.2	12.0	13.0	13.0
30			5.0					6.3	G	G	C	C

Count	6	3	1	4	2	3	1	27	27	29	28	29
Median	4.1	..	..	..	..	..	..	6.6	11.0	12.0	12.6	12.7
Mean	4.2	..	..	..	..	..	..	7.8	10.6	11.7	12.3	12.7

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : April, 1960

TABLE 37 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
6.8	G	B	B	10.5	9.4		C	C	C	C	C	1
10.5	9.8	10.4	C	10.2	7.4	S			6.4	3.2	2.8	2
17.0	G	11.3	9.8	9.8	7.4			2.3				3
12.8	12.0	11.2	9.6	8.2	7.4			C			U7.0s	4
12.6	12.8	11.8	11.4	9.8	7.6							5
13.5	12.5	7.7	G	7.6	8.1				4.4	U4.8s	4.0	6
12.8	12.4	10.6	9.8	8.9	8.4							7
12.0	10.9	8.8	4.9	3.8	S							8
12.4	12.1	8.9	G	8.4	8.6							9
11.8	12.2	12.1	9.8	8.3	7.5							10
13.6	13.0	12.4	10.0	8.8	7.0				3.8			11
13.0	12.6	12.8	G	17.4	8.0				4.6	7.0	U7.0s	12
13.0	10.2	5.6	10.8	10.6	7.0						3.8	13
12.8	13.0	12.0	11.0	9.0	G				3.6			14
12.9	12.7	12.6	9.8	7.8	7.6					2.8	3.8	15
12.6	12.4	12.2	12.0	U10.0s	7.8							16
12.8	12.2	12.0	10.6	8.1	U7.8s						U4.8s	17
12.5	12.4	11.8	U12.0s	U10.6s	U6.6s							18
12.6	12.3	12.2	11.4	10.8	7.7							19
12.0	12.4	11.6	11.7	9.5	8.5	C			1.9			20
13.0	12.4	12.0	10.0	10.0	7.0			C	C	C	C	21
13.0	13.0	12.0	10.0	9.0	7.0							22
13.0	13.0	11.0	G	9.0	6.0							23
13.0	12.4	12.0	11.0	10.0	7.0		C	C	U4.8s			24
12.0	12.6	11.4	10.2	12.0	C				3.8	3.0	5.2	25
12.4	13.2	12.4	8.4	3.6	8.0						4.0	26
13.0	13.0	12.2	8.8	9.0	8.0					6.0		27
13.0	13.0	13.0	7.8	G	8.0			6.6	4.0	C		28
13.0	12.0	13.3	12.0	11.4	8.0				2.1	2.4		29
13.0	12.5	12.6	11.0	11.2	8.6				U4.2s		2.4	30
30	30	29	28	30	28	..	..	2	11	7	10	Count
12.8	12.4	12.0	10.0	9.2	7.6	..	..	..	4.0	3.2	4.0	Median
12.6	12.3	11.4	10.2	9.4	7.7	..	..	..	4.0	4.2	4.5	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : April, 1960

TABLE 37 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							G	10.2	10.8	G	9.2	11.8
2	C	C		C	C	C	C	C	C	C	11.6	11.8
3	U5.5s	3.4						7.7	10.8	11.6	B	9.8
4	2.6							8.4	10.8	12.4	12.5	12.6
5					2.4			B	B	11.4	12.0	12.6
6			8.8					7.6	12.9	12.6	12.7	13.6
7	3.3	4.9	3.8	4.4				10.9	11.4	12.9	12.6	12.6
8							5.7	8.9	11.6	12.4	12.2	12.7
9								9.8	12.3	12.6	12.4	11.8
10							8.6	11.4	12.2	12.4	12.6	12.3
11								G	11.6	12.4	13.8	12.5
12								8.4	12.2	12.4	12.8	12.8
13								9.4	12.0	12.4	12.6	12.7
14							G	4.2	11.0	12.3	13.0	12.0
15		S	6.2	8.4	8.9		7.8	10.8	12.2	12.6	13.4	13.4
16							G	8.8	11.6	12.6	12.6	12.7
17			3.8	U5.0s			G	8.8	C	12.2	11.6	12.6
18							G	10.3	12.4	12.0	12.7	12.6
19							G	8.2	12.2	12.4	12.8	13.2
20							G	9.4	11.2	12.1	12.0	12.0
21							G	9.0	12.0	12.6	12.4	12.6
22	C	C	C	C	C	C	C	C	12.0	13.0	13.0	13.4
23								9.0	11.2	12.4	13.0	12.4
24				C				G	10.0	12.0	12.4	13.0
25								7.6	11.2	12.0	12.0	12.0
26							C	C	12.0	13.4	13.0	13.0
27							G	11.0	12.0	12.2	12.4	13.0
28							G	G	11.0	12.2	12.8	12.2
29							G	G	12.0	13.0	13.0	13.0
30							G	G	G	12.8	C	12.6

Count	3	2	4	3	2	..	14	26	27	29	28	30
Median	..	..	..	..	..	..	G	9.0	11.6	12.4	12.6	12.6
Mean	..	..	..	..	..	..	..	9.0	11.6	12.4	12.5	12.5

Sweep 1.0 Mo. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc.

Month : April, 1960

TABLE 37 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
12.4	11.4	B	B	10.0			C	C	C	C	C	1
10.0	8.4	C	11.2	9.6	7.4				4.2	3.4		2
10.5	G	8.6	10.4	8.4			2.2					3
12.5	11.6	11.2	C	8.0			C				5.0	4
12.8	12.8	11.6	11.0	8.6								5
13.0	12.3	9.2	7.0	7.8	u7.6s			2.1	4.8	4.3	3.1	6
13.2	11.8	9.7	8.6	8.1							5.6	7
9.8	10.8	8.0	4.4	7.5								8
12.1	11.7	G	8.2	7.8			4.2				2.8	9
12.4	12.5	9.6	8.6	8.6	5.8							10
13.8	12.8	11.3	9.2	7.5				2.1	4.4	4.6		11
12.8	13.0	B	10.2	9.4	3.4				3.8	u7.6s		12
12.8	11.4	5.7	10.8	8.6					4.4	4.2		13
12.4	12.4	11.0	9.2	G					2.2			14
12.7	13.1	10.9	9.3	7.9						4.1	u4.6s	15
12.1	12.4	12.2	11.6	8.2	S							16
12.2	11.4	11.2	9.2	8.0								17
12.7	12.2	11.5	11.2	8.7	S							18
12.2	C	11.7	10.2	8.2	u5.8s						4.2	19
12.2	12.0	11.6	9.6	8.5	S							20
13.0	12.2	11.0	11.0	8.0				C	C	C	C	21
13.0	12.0	10.0	9.0	8.4						4.0		22
13.0	11.0	G	9.4	8.0								23
13.0	12.6	11.0	11.0	9.0			C	C				24
12.0	11.0	9.0	12.4	8.0	C			3.0	3.2			25
13.0	12.0	12.0	10.0	7.0	7.0				2.4			26
12.8	12.8	10.4	9.0	8.0	6.6				8.0			27
12.6	13.0	9.2	G	G	7.0		2.8	7.0				28
12.0	13.3	11.6	11.6	9.0	5.8				3.2			29
13.0	13.2	12.0	11.0	8.6	7.0							30
30	29	27	28	30	10	..	3	4	10	7	6	Count
12.6	12.2	11.0	9.8	8.2	6.8	..	..	..	4.0	4.2	4.4	Median
12.4	12.0	10.4	9.8	8.3	6.3	..	..	..	4.1	4.6	4.2	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc

Month : April, 1960

TABLE 38  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								G	3.5	3.8	4.0	4.2
2	C	C	C	C	C	C	C	C	C	C	C	4.1
3		1.4						G	3.4	4.0	..	..
4	1.5							G	3.4	3.9	4.1	4.4
5						1.6		G	B	..	..	..
6								2.8	3.4	3.8	4.0	4.1
7		1.6		2.1				2.8	3.3	3.8	4.1	4.2
8	1.4							3.2	3.3	3.8	4.1	4.1
9	1.4								3.4	3.9	4.2	4.3
10								2.9	3.4	4.0	4.0	4.3
11				1.7				G	3.4	3.8	4.1	4.3
12								3.0	3.4	3.8	4.1	4.3
13								3.0	3.5	4.0	4.2	4.5
14								G	3.6	4.0	4.2	4.4
15		1.8	1.9	2.2	2.7			2.9	3.6	3.8	4.2	4.3
16	2.0							3.0	3.5	3.9	4.0	4.2
17				C	1.6			3.0	3.4	3.8	4.0	4.3
18								3.0	3.5	4.0	4.2	4.4
19									3.5	4.0	4.2	4.3
20	1.9							G	3.5	4.0	4.2	4.4
21								2.9	3.5	3.9	4.0	4.2
22	C	C	C	C	C	C	C	C	3.4	3.8	4.1	4.2
23								3.0	3.4	4.0	4.1	4.2
24				C				G	G	3.9	4.0	4.2
25						1.6			3.8	3.8	4.2	4.2
26								C	C	3.7	4.0	4.0
27							G	2.8	3.4	3.7	4.0	4.0
28								3.1	G	3.8	4.0	4.2
29								G	..	..	..	..
30									G	G	C	C
Count	5	3	1	3	2	2	1	23	26	27	25	26
Median	1.5	..	..	..	..	..	..	2.8	3.4	3.8	4.1	4.2
Mean	1.6	..	..	..	..	..	..	3.0	3.5	3.9	4.1	4.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc

Month : April, 1960

TABLE 38 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
	G	B	B	4.5			C	C	C	C	C	1
	4.2			3.3	2.8				2.2	1.7	1.7	2
4.8	G	4.0	3.6	3.2	3.0			1.7				3
4.4	4.2			3.4							1.8	4
	4.4	4.3	4.0	3.4								5
4.2	4.2	4.1		3.3	3.0				2.1	2.1	2.3	6
4.3	4.2	3.9	3.7	3.2	2.7							7
4.0	6.8	5.0	3.6	3.2	2.7							8
4.2	4.1	3.9			2.8							9
4.3	4.3	4.1	3.7	3.5	2.8							10
4.2	4.2	4.0	3.6	3.3	2.8				1.6			11
4.3	4.2	4.0		6.6	3.8				1.5	2.2	2.3	12
4.5	4.2	4.3	4.1	3.5	2.7						1.5	13
4.4	4.4	4.2	3.8	3.4								14
4.4	4.5	4.1	3.9	3.3	2.8					1.9		15
4.4	4.1	4.1	3.8	3.3	2.7							16
4.4	4.2	4.0	3.7	3.3	2.6						2.0	17
4.4	4.2	4.0	3.7	3.4	2.6							18
4.2	4.2	4.0	3.7	3.3								19
4.4	4.2	4.2	3.9	3.4		C						20
4.4	4.2	4.0	3.8	3.0	2.8			C	C	C	C	21
4.2	4.2	4.0	3.7	3.4	2.8							22
4.2	4.2	4.0	G	3.4	2.8							23
4.2	4.1	3.8	3.8	3.4			C	C	1.5			24
4.2	4.4	4.0	3.8	3.6	C				1.9	2.2	2.6	25
4.2	4.2	4.0	3.6	3.2	2.8							26
4.0	4.0	3.9	3.7	3.4	4.0					1.8		27
4.2	4.0	4.0	3.6	G	2.6			2.0	2.6	C		28
	4.2	4.0	3.6	3.2	2.6					1.5		29
4.2	4.0	3.8	3.6	3.2	2.8				1.5			30

26	30	27	24	29	22	..	..	2	8	7	7	Count
4.2	4.2	4.0	3.7	3.3	2.8	..	..	..	1.8	1.9	2.0	Median
4.3	4.3	4.1	3.7	3.5	2.9	..	..	..	1.9	1.9	2.0	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc

Month : April, 1960

TABLE 38 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							G	3.1	3.6	G	4.2	4.3
2	C	C	C	C	C	C	C	C	C	C		4.2
3	1.5							3.2	3.6	3.9	B	4.3
4	1.5							3.4	3.8	4.0	4.3	4.5
5					1.7			B	B			
6								3.1	3.6	4.1	4.1	4.2
7		2.1		1.7				3.0	3.6	3.9	4.1	4.4
8							2.5	3.2	3.6	3.9	4.0	4.2
9								3.2	3.7	4.0	4.2	4.3
10							2.7	3.3	3.7	3.9	4.1	4.2
11								G	3.5	3.8	4.0	4.2
12								3.1	3.6	4.2	4.3	4.4
13								3.2	3.6	4.1	4.2	4.4
14							G	3.5	3.6	4.0	4.3	4.4
15		1.8	1.6	2.3	2.8		2.8	3.4	3.6	4.0	4.2	4.4
16							G	3.2	3.6	4.0	4.1	4.4
17			2.5	2.0			G	3.1	C	4.0	4.2	4.2
18							G	3.3	3.8	4.0	4.2	4.4
19							G	3.3	3.8	4.0	4.3	4.2
20							G	3.2	3.7	3.9	4.2	4.3
21							G	3.2	3.8	4.0	4.2	4.2
22	C	C	C	C	C	C	C	C	3.6	4.2	4.2	4.2
23								3.2	3.8	4.0	4.2	4.2
24				C				G	3.8	3.9	4.2	4.3
25									3.8	4.0	4.2	4.3
26							C	C	3.6	3.8	4.0	4.2
27							G	3.2	3.6	3.8	4.0	4.2
28								G	3.6	4.0	4.2	4.2
29							G	G				
30							G	G	G	4.0	C	4.2
Count	2	2	2	3	2	..	14	25	26	27	25	28
Median	..	..	..	..	..	..	G	3.2	3.6	4.0	4.2	4.2
Mean	..	..	..	..	..	..	..	3.2	3.7	4.0	4.2	4.3

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc

Month : April, 1960.

TABLE 38 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
4.2	4.0	B	B				C	C	C	C	C	1
	4.0	C	3.6	3.0								2
4.2	G	3.9	3.6	3.0			1.7					3
4.3	4.2	4.2	C	3.0			C				1.7	4
	4.3	4.0	3.7	3.2								5
4.3	4.2	4.0	3.6	3.3				1.6	1.6	2.3	1.9	6
4.3	4.1	3.8	3.7	3.0							1.4	7
4.3	4.4	4.2	4.5	3.0								8
4.2	4.2		3.4	3.0								9
4.2	4.1	4.0	3.5	3.2	2.3							10
4.2	4.0	3.8	3.4	3.0				1.6	1.6	2.0		11
4.2	4.0		4.0	4.1	2.6				1.8	2.4		12
4.2	4.3	4.6	3.7	3.1					1.4			13
4.4	4.2	4.0	3.6	G					1.6			14
4.4	4.2	4.0	3.5	3.0						1.7	2.1	15
4.3	4.2	4.0	3.5	3.0	2.2							16
4.2	4.0	3.9	3.5	3.1								17
4.3	4.2	4.0	3.4	3.0								18
4.3	C	4.2	3.6	3.1							1.8	19
4.3	4.2	4.0	3.8	3.1								20
4.2	4.2	4.0	3.5	3.0				C	C	C	C	21
4.3	4.2	4.0	3.6	3.2						1.6		22
4.4	4.0	G	3.8	3.0								23
4.2	4.2	4.0	3.6	3.0			C	C				24
4.2	4.2	4.0	3.8	3.0	C				2.1			25
4.2	4.0	3.8	3.4	3.0	2.8				2.1			26
4.2	4.0	3.9	3.5	3.5					1.8			27
4.1	4.0	3.8	G	G			2.0	2.6				28
4.4	4.0	4.0	3.5	2.9								29
4.2	4.0	3.8	3.4	3.0	2.3							30
28	29	26	28	29	5	..	2	3	8	5	5	Count
4.2	4.2	4.0	3.6	3.0	2.3	..	..	..	1.7	2.0	1.8	Median
4.2	4.1	4.0	3.6	3.1	2.4	..	..	..	1.8	2.0	1.8	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : fmin

Unit : Mc

Month : April, 1960

TABLE 39  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	1.6	1.2	1.1	1.7	E	E	2.0	1.9	2.8	2.5	2.7	3.1
2	C	C	C	C	C	C	C	C	C	C	C	3.1
3	1.5	1.3	1.3	1.4	1.5	E	2.4	2.0	2.4	2.6	3.0	4.6
4	1.2	1.3	1.1	1.3	1.4	1.5	2.2	2.6	2.6	3.0	3.1	3.2
5	1.3	1.4	1.6	1.7	1.5	1.3	2.0	4.0	5.3	5.4	5.2	5.0
6	1.2	1.4	1.5	1.8	1.6	1.5	2.3	2.5	2.4	2.5	2.6	2.8
7	1.7	1.3	2.4	2.1	1.4	1.3	2.1	2.0	2.2	2.6	2.8	2.9
8	1.1	1.2	1.3	1.6	1.7	2.2	2.2	2.1	2.4	2.7	2.9	3.0
9	1.2	1.2	1.4	1.3	1.5	1.6	2.2	2.1	2.4	2.9	3.1	3.3
10	1.2	1.3	1.3	1.4	1.5	1.9	2.3	2.0	2.3	2.7	3.0	2.9
11	2.0	1.5	2.0	1.4	2.0	1.7	2.3	1.9	2.3	2.7	2.8	2.9
12	1.5	1.8	1.5	1.5	1.5	1.8	2.5	2.4	2.9	2.6	2.8	3.0
13	2.2	2.0	1.6	1.9	2.0	2.2	2.4	2.2	2.5	2.8	3.0	3.2
14	1.4	1.5	1.6	1.4	1.5	1.5	2.4	2.3	2.8	2.8	3.0	3.2
15	1.4	1.2	1.1	1.4	2.5	2.0	2.5	2.6	2.4	2.6	2.8	3.2
16	1.7	1.5	1.4	1.4	1.7	1.7	2.2	2.2	2.5	2.5	2.7	3.0
17	1.6	1.6	1.4	C	1.1	2.1	2.2	1.8	2.3	2.6	2.8	3.0
18	1.5	1.4	1.4	1.4	1.6	1.6	2.4	1.8	2.3	2.6	2.8	3.0
19	1.4	1.6	1.3	1.5	1.5	1.6	2.2	2.0	2.3	2.6	2.6	3.1
20	1.6	1.2	1.6	1.4	1.6	1.5	2.3	1.8	2.1	2.4	2.7	2.9
21	1.4	1.6	1.5	1.5	1.5	1.9	2.2	2.0	2.2	2.8	2.6	2.8
22	C	C	C	C	C	C	C	C	2.2	2.6	2.8	3.0
23	1.7	1.6	1.7	1.5	1.4	1.6	2.2	2.2	2.6	2.7	2.9	3.1
24	1.5	1.6	1.5	C	1.5	1.3	2.2	1.9	2.4	2.6	3.0	3.0
25	1.7	1.5	1.3	1.3	1.2	1.1	2.2	2.4	2.7	3.0	3.0	4.0
26	2.1	1.8	1.6	1.3	1.6	1.8	2.2	C	C	2.4	2.6	2.6
27	1.1	1.5	1.3	1.2	1.4	1.7	1.8	1.6	2.2	2.6	2.6	2.8
28	1.6	1.4	2.0	1.7	1.5	E	2.2	2.6	2.6	3.0	2.8	3.0
29	1.9	1.7	1.9	1.1	1.4	1.5	2.4	2.2	4.0	4.8	5.2	5.0
30	1.4	1.5	1.7	1.6	1.6	1.7	2.4	1.8	2.6	3.0	C	C

Count	28	28	28	26	28	28	28	27	28	29	28	29
Median	1.5	1.5	1.5	1.4	1.5	1.6	2.2	2.1	2.4	2.6	2.8	3.0
Mean	1.5	1.5	1.5	1.5	1.6	1.7	2.2	2.2	2.6	2.8	3.0	3.2

Sweep 1.0 Mc, to 25.0 Mc, in 27 seconds,

Characteristic : fmin

Unit : Mc

Month : April, 1960

TABLE 39 (Contd.)

Ionospheric Data

75.0 E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
3.6	3.8	B	6.6	4.5	3.2	1.8	C	C	C	C	C	1
4.8	2.8	4.8	C	2.3	2.4	2.0	1.5	1.4	1.8	1.5	1.7	2
3.2	3.2	2.7	2.8	2.2	3.0	1.8	1.5	1.4	1.4	1.6	1.4	3
3.1	3.2	4.8	4.0	2.4	2.6	2.1	1.7	C	1.5	1.4	1.3	4
4.8	4.1	3.4	2.8	2.7	2.8	1.9	1.3	1.6	1.5	1.5	1.6	5
3.1	3.0	2.8	3.2	2.3	2.3	2.3	1.4	1.2	1.2	1.6	2.2	6
3.0	3.1	2.8	2.6	2.4	2.2	1.7	1.6	1.5	1.3	1.2	1.2	7
3.1	3.0	2.8	2.5	2.5	2.3	1.8	1.0	1.5	1.4	1.3	1.3	8
3.0	3.0	2.7	2.9	3.6	2.3	1.7	1.2	1.3	1.1	1.6	1.5	9
3.0	3.2	3.0	2.8	2.4	2.4	2.0	1.3	1.5	1.6	1.6	1.6	10
3.0	2.8	2.7	2.6	2.3	2.8	1.8	1.5	1.6	1.1	1.6	1.4	11
3.1	3.1	3.0	2.8	2.4	2.2	1.8	1.3	1.4	1.2	1.3	2.0	12
3.1	3.2	3.0	2.6	2.2	1.9	1.7	1.3	1.5	1.4	1.3	1.5	13
3.0	3.0	3.2	2.7	2.2	2.2	1.8	1.7	1.5	1.5	1.3	1.6	14
3.1	C	2.9	2.8	2.4	2.2	1.6	1.3	1.2	1.4	1.1	1.6	15
3.0	3.0	2.7	2.6	2.2	1.9	1.8	1.5	1.3	1.5	1.5	2.0	16
3.0	2.8	2.7	2.7	2.3	2.5	1.9	1.7	1.7	1.5	1.4	1.3	17
3.0	3.1	2.7	2.6	2.4	1.9	1.9	1.5	U1.4s	1.6	U1.5s	1.5	18
3.1	3.1	2.8	2.8	2.2	2.0	1.8	1.2	S	1.5	1.7	1.2	19
3.0	2.9	3.0	2.5	2.3	S	C	S	S	U1.4s	1.2	U1.4s	20
3.0	3.0	2.6	2.7	2.4	2.2	1.7	S	C	C	C	C	21
3.0	3.0	3.0	2.8	2.4	2.2	1.7	S	S	1.6	2.0	1.5	22
3.2	3.0	3.0	3.0	2.3	2.4	3.0	1.3	1.5	1.4	1.5	1.4	23
3.0	3.0	2.8	2.8	2.4	2.7	2.0	C	C	U1.2c	2.0	1.7	24
3.8	3.4	3.0	2.6	2.2	C	1.7	U1.2c	1.5	1.1	1.3	2.0	25
3.0	2.8	2.8	2.4	2.4	2.0	1.7	1.3	1.6	1.5	1.6	1.5	26
3.0	2.8	2.8	2.2	2.0	1.9	1.7	1.5	1.4	1.3	1.4	1.5	27
2.9	3.0	2.8	2.6	2.6	2.1	1.9	1.4	1.4	2.4	C	1.8	28
4.6	3.6	3.0	2.6	2.2	1.8	1.7	1.1	1.5	1.5	1.2	1.3	29
3.0	2.8	2.6	2.4	2.2	2.0	1.8	1.3	1.6	1.3	2.2	1.7	30
30	29	29	29	30	28	29	25	23	28	27	28	Count
3.0	3.0	2.8	2.7	2.4	2.2	1.8	1.3	1.5	1.4	1.5	1.5	Median
3.2	3.1	3.0	2.9	2.4	2.3	1.9	1.4	1.4	1.4	1.5	1.6	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : April, 1960

TABLE 39 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2N

Longitude : 77°5E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	1.4	1.1	1.6	1.7	E	1.9	1.9	2.2	2.3	2.8	3.2	3.1
2	C	C	C	C	C	C	C	C	C	C	4.6	3.3
3	1.4	1.5	1.4	1.5	1.7	2.0	2.7	2.2	2.9	2.8	6.0	3.2
4	1.4	1.4	1.1	1.4	1.4	1.7	2.6	2.6	2.8	3.3	3.2	3.3
5	1.3	1.5	1.7	1.4	1.2	1.8	2.8	5.6	5.5	5.0	4.8	5.0
6	1.2	1.3	1.6	1.9	1.5	1.6	2.6	2.4	2.5	2.7	2.8	3.0
7	1.6	1.7	2.6	1.5	1.4	1.6	2.6	2.0	2.5	2.7	2.8	2.0
8	1.2	1.2	1.2	1.7	2.1	2.2	2.0	2.2	2.5	2.8	2.8	3.1
9	1.3	1.6	1.4	1.4	1.9	1.8	2.6	2.2	2.6	2.7	3.0	3.0
10	1.4	1.3	1.3	1.6	1.7	1.9	2.3	2.3	2.5	2.7	3.0	3.0
11	1.6	1.4	1.6	1.9	1.9	1.5	2.7	2.2	2.6	2.6	2.8	3.0
12	1.5	1.6	1.6	1.4	2.2	2.6	3.0	2.6	2.6	2.8	3.0	3.0
13	2.1	1.6	1.6	2.1	1.9	2.4	2.8	2.4	2.5	2.9	3.1	3.1
14	1.5	1.7	1.6	1.5	1.5	1.8	2.2	2.6	2.6	2.8	3.2	3.2
15	1.4	1.2	1.1	1.9	1.9	2.2	1.9	2.3	2.4	2.5	2.9	3.1
16	1.7	1.4	1.6	1.4	1.5	1.6	2.2	2.3	2.4	2.7	2.8	2.9
17	1.4	1.4	1.2	E	1.9	1.8	2.5	2.0	C	2.7	3.0	2.8
18	1.5	1.4	1.4	1.7	1.6	2.0	2.0	2.2	2.6	2.8	3.1	3.2
19	1.7	1.4	1.6	1.6	1.6	1.8	1.9	1.9	2.4	2.6	2.9	3.0
20	1.4	1.3	1.2	1.4	1.8	1.7	1.8	1.9	2.4	2.5	2.8	3.2
21	1.2	1.3	1.5	1.5	1.8	1.7	2.0	2.2	2.6	2.8	2.8	3.0
22	C	C	C	C	C	C	C	C	2.4	2.6	2.8	3.0
23	1.5	1.7	1.8	1.4	1.7	1.9	2.6	2.2	2.8	2.8	3.0	3.2
24	1.5	1.7	1.5	C	1.6	1.8	2.6	2.4	3.4	2.8	3.0	3.0
25	1.7	1.4	1.4	1.3	1.4	2.0	3.0	3.0	2.8	3.0	3.4	3.4
26	2.3	1.7	1.7	1.6	1.6	2.0	C	C	2.6	2.4	2.7	3.0
27	1.4	1.2	1.2	1.4	1.4	1.7	1.9	1.8	2.2	2.4	2.6	2.9
28	1.4	1.5	2.1	1.3	1.7	2.2	3.0	2.8	2.6	2.7	3.0	3.0
29	1.7	1.8	1.6	1.5	1.3	1.7	1.8	3.6	4.2	5.6	4.8	5.0
30	1.4	1.8	1.8	1.6	1.8	2.0	2.0	2.4	2.8	2.4	C	2.8

Count	28	28	28	27	28	28	27	27	28	29	29	30
Median	1.4	1.4	1.6	1.5	1.6	1.8	2.5	2.3	2.6	2.7	3.0	3.0
Mean	1.5	1.5	1.5	1.6	1.7	1.9	2.4	2.5	2.8	2.9	3.2	3.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : April, 1960

TABLE 39 (Contd.)

Ionospheric Data

75 0°E Mean Time

Latitude : 10°2N

Longitude : 77°5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
3.0	3.6	9.6	5.0	3.8	2.5	1.6	C	C	C	C	C	1
4.2	2.9	C	2.3	2.4	2.4	1.3	1.3	1.2	1.8	1.4	1.6	2
3.1	3.0	2.7	2.5	2.2	2.6	1.7	1.5	1.6	1.6	1.6	1.4	3
3.2	3.0	3.6	C	2.6	2.3	1.5	C	S	1.3	1.4	1.3	4
4.6	3.9	3.0	2.8	3.1	2.4	1.4	1.6	1.5	1.5	1.7	1.4	5
3.0	3.0	2.8	2.8	2.4	2.7	1.7	1.3	E	1.2	1.8	1.5	6
3.1	2.8	3.0	2.4	2.3	2.1	1.4	S	1.3	1.2	1.2	1.3	7
3.1	2.8	3.0	2.4	2.3	2.2	1.6	1.2	1.1	1.2	1.3	1.3	8
3.1	2.9	3.0	2.5	2.3	2.3	1.4	1.2	1.2	1.3	1.5	1.4	9
3.1	3.1	3.0	2.6	2.4	2.3	1.6	1.4	1.3	1.6	1.4	1.8	10
3.0	2.8	2.8	2.4	2.3	2.3	1.6	1.6	1.6	1.3	1.4	1.8	11
3.0	2.9	4.8	2.4	2.3	2.3	1.6	1.5	1.4	1.2	1.7	2.5	12
3.0	3.0	2.9	2.4	2.2	2.3	1.4	1.5	1.3	1.2	1.3	1.5	13
3.0	3.2	2.8	2.2	3.1	2.4	1.5	1.5	1.6	1.1	1.3	1.3	14
3.4	3.0	3.0	2.5	2.1	2.4	1.6	1.6	1.1	1.3	1.1	1.7	15
2.9	2.9	2.8	2.3	2.2	1.9	1.5	1.5	1.5	1.7	1.9	1.7	16
2.8	2.8	3.0	2.5	2.6	2.3	1.4	1.6	1.4	1.5	1.5	1.7	17
3.2	3.0	2.8	2.5	2.2	2.3	1.5	1.3	U1.4s	1.5	1.5	1.4	18
3.0	C	3.0	2.5	2.4	2.4	S	S	1.4	1.7	1.6	1.2	19
3.0	3.0	3.0	2.5	2.3	U2.5s	C	S	S	U1.3s	U1.5s	1.4	20
3.0	3.0	2.9	2.6	2.6	2.4	1.5	S	C	C	C	C	21
3.0	2.8	3.0	2.6	2.2	2.4	1.5	1.4	S	1.5	1.4	1.7	22
3.0	3.0	2.8	2.4	2.3	2.4	1.5	1.3	1.4	1.5	1.4	1.4	23
3.0	2.8	2.8	2.8	U2.0s	2.2	1.7	C	C	1.6	1.7	1.7	24
3.6	3.0	3.0	2.2	2.2	C	1.3	C	1.5	1.4	C	2.0	25
2.9	2.8	2.6	2.4	2.1	2.3	1.6	1.5	1.5	1.6	1.5	1.3	26
2.8	2.7	2.7	2.2	2.2	1.7	1.5	1.6	1.5	1.4	1.5	1.5	27
3.0	2.8	2.7	2.6	2.5	2.4	1.7	1.5	1.9	2.0	U1.8c	1.7	28
3.7	3.0	2.8	2.4	1.9	2.2	1.4	1.3	1.3	1.5	1.4	1.5	29
3.0	2.6	2.6	2.4	2.2	1.7	1.9	1.5	1.7	1.9	1.7	1.6	30
30	29	29	29	30	29	28	22	24	28	27	28	Count
3.0	3.0	2.9	2.5	2.3	2.3	1.5	1.5	1.4	1.5	1.5	1.5	Median
3.2	3.0	3.2	2.6	2.4	2.3	1.5	1.4	1.4	1.5	1.5	1.6	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km

Month : April, 1960

TABLE 40  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									L	L	L	L
2								C	C	C	C	L
3								L	L	L	L	L
4								L	L	L	L	L
5									L	L	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L <sup>H</sup>	L	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								C	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26								C	C	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	C	C
Count												
Median												
Mean												

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km

Month : April, 1960

TABLE 40 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude 77°5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	B	B	L	L							1
L	L	L	C	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
												5
L	L	L	L	L	L							6
L	L	L	L	L	L							7
L	A	L	L	L	L							8
L	L	L	L	L	L							9
												10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
												15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
												20
U280L	L	L	L	L	L							21
L	L <sup>H</sup>	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
												26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
1	..	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km

Month : April, 1960

TABLE 40 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	L
2							C	C	C	C	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	L
12								L	L <sup>H</sup>	L	L	L
13							L	L	L	L	L	L
14								L	L	L	L	L
15								L	L <sup>H</sup>	L	L	L
16								L	L	L	L	L
17							L	L	C	L	L	L
18								L	L	L	L	L
19							L	L	L	L	L	L
20							L	L	L	L	L	L
21								L	L	L	L	L
22							C	C	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26							C	C	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	C	L
Count							..	..	..	..	..	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km

Month : April, 1960

TABLE 40 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	B	L	L	L							1
L	L	C	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
												5
L	L	L	L	L								6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
												10
L	L	L	L	L								11
L	L	L	L	L								12
L	L	L	L	L								13
L	L	L	L	L								14
												15
L	L	L	L	L								16
L	L	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
												25
L	L	L	L	L								26
L	L	L	L	L								27
L	L	L	L	L								28
L	L	L	L	L								29
												30
..	..	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. in 25.0 Mc. in 27 seconds.



Characteristic : h'F  
Unit : Km  
Month : April, 1960

TABLE 41  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	290	340	410	280	E	E	310	250	255	230	220	210
2	C	C	C	C	C	C	C	C	C	C	C	210
3	245	225	220	215	220	E	240	230	220	215	210	U220B
4	250	250	245	240	220	205	250	235	230	215	200H	200H
5	260	260	215	220	245	340	265	250	B	B	B	U240B
6	290	280	260	225	220	220	260	240	230	225	220	210
7	270	255	220	245	300	320	260	240	230	210	210	200
8	300	F	F	320	260	240	260	240	225	205	205	210
9	255	255	240	225	210	215	260	240	230	220	205	200
10	240	240	240	225	210	220	260	230H	220	220	220	200
11	235	225	235	235	250	250	270	250	235	220	210H	220
12	250	265	260	240	235	220	260	245	230	230	220H	215
13	275	260	240F	220F	U230F	240	265	245	235	220	220	210
14	220	240	240	240	220	220	240	240	230	220	220	205
15	245	245	F	U250F	230	215	245	240	225	210	200	210
16	270	260	250	245	220	225	260	245	235	210H	205	205H
17	265	240	245	C	255	230	270	255	240	225	220	210
18	255	260	240	250	250	245	255	240	220	220	205H	210
19	235	240	240	250	225	225	255	240	230	220	220	200
20	240	230	240	230	220	220	255	240	225H	205	205H	200
21	230	230	240	240	240	230	260	240	230	215	210	205
22	C	C	C	C	C	C	C	C	220	210	220	220
23	260	250	270	250	220	210	250	240	220	220	210	200
24	250	230	230	C	230	260	250	250	235	230	220	220
25	265	265	260	240	240	270	265	250	240	230	220	220
26	260	275	250	240	220	220	260	C	C	210	200	200
27	240	260	250	240	205	210	260	240	220	215	210	200
28	240	240	200	220	230	E	240	240	235	220	220	210
29	260	280	300	300	265	220	260	240	240	B	B	B
30	220	240	260	225	210	220	240	240	220	220	C	C

Count	28	27	26	26	28	28	28	27	27	27	26	28
Median	250	250	240	240	230	225	260	240	230	220	210	210
Mean	255	255	250	245	235	235	260	240	230	220	210	210

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F  
Unit : Km  
Month : April, 1960

TABLE 41 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
220	230	B	B	B	270	305	C	C	C	C	C	1
U220B	210	B	C	235	250	270	290	280	265	250	245	2
U220A	205	215	210	225	250	270	300	290	270	240	235	3
200H	195	B	220	220	245	280	400	C	265	220	F	4
U235B	215	220	230	235	250	280	380	F	U380F	300	300	5
200	200	200	230	235	255	290	390	300F	F	290	260	6
210	205	225	215	225	250	285	U400F	F	F	F	255	7
200	A	A	215	230	245	280	F	F	F	F	260	8
200	200	210	210H	240	260	290	F	U320F	F	F	235	9
200	200	210	215	240	260	295	370F	320	260	270	245	10
210	220H	210H	220	235	255	295	U380F	F	U360F	U300F	245	11
205	205	220	235	A	265	295	U365F	370F	310	305F	280	12
215	215H	220	245	255	260	295	380	F	F	260	245	13
200H	200H	200	210	240	250	280	400	400F	360	320	260	14
205	220	215	225	245	265	280	360	F	U330F	300F	275	15
200	200	210	230	245	260	300	425	F	320	285	300	16
205	A	210	U220A	240	260	300	420	465	400	320	280	17
200	205	210	215	240	255	300	420	U410F	400F	350	240	18
200	200	205	200H	225	255	300	F	F	F	F	260	19
195	200	200	210H	235H	260	C	F	F	F	F	245	20
200	200	220	220	225	255	300	420s	C	C	C	C	21
210	215	210	215	220	250	295	F	380	350	F	260	22
200	200	205	220	240	250	285	400	400	400	300	240	23
210	210	220	230	240	260	285	C	C	325	300	280	24
210	220	220	220	240	C	290	360F	350	340	310	280	25
205	210	210	225	230	255	280	360	360	360	300	245	26
200	200	205	220	230	260	265	360	320	900	280	260	27
210	200	200H	220	240	260	300	300	265	260	C	260	28
B	205	220	240	240	260	280	350	290	280	250	230	29
220	220	210	200	240	260	260H	350	360F	320	200	220	30
29	28	26	28	28	29	29	23	17	21	21	27	Count
205	205	210	220	240	255	290	380	350	325	300	260	Median
205	205	210	220	235	255	285	375	345	325	285	255	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km

Month : April, 1960

TABLE 41 (Contd.)

Ionospheric Data

75° 0'E Mean Time

Latitude : 10° 2'N

Longitude : 77° 5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	310	400	360	230	E	305	270	260	245	225	220	215
2	C	C	C	C	C	C	C	C	C	C	U230B	215
3	240	225	215	215	235	300	240	220	220	205	B	205
4	250	255	240	230	210	220	245	235	220	215	200H	200H
5	265	230	220	225	280	325	250	B	B	B	U240B	B
6	295	270	235	220	220	230	250	240	225	220	215	200
7	255	230	225	270	340	280	255	230	215	210	205	205
8	340	B	B	285	240	245	245	235	215	200	205	205
9	255	250	230	220	210	235	250	240	220	215	200	205
10	240	250	230	220	215	240	250	230	215	220	200	200
11	225	225	240	230	250	270	260	240	225	210H	210H	215H
12	255	265	245	235	225	235	255	240	230H	225	220	220H
13	275	250	230F	U220F	230	265	255	240	225	220	220	210
14	235	240	240	220	220	240	240	240	220	220	210	200H
15	240	255	255	240	220	230	245	230	220	210	215	210
16	265	260	250	220	230	240	245	240	220	205H	205H	200H
17	245	245	270	280	225	250	260	245	C	220	215	205
18	255	250	245	245	255	250	250	235	220	215	205	200
19	235	245	250	235	220	240	250	235	225H	220	210	200
20	235	235	240	225	225	250	250	235	220	205H	200	195
21	225	230	240	240	240	250	250	230	230	220	210	200
22	C	C	C	C	C	C	C	C	220	220	210	205
23	240	270	270	220	205	250	250	240	220	220	205	200
24	245	230	220	C	240	240	250	240	235	230	220	210
25	260	260	240	235	240	280	260	240H	235	230	220	210
26	280	260	240	225	230	250	C	C	220	200	200	205
27	260	260	240	215	205	245	240	220	220	220	210	200
28	240	200	220	220	240	260	240	240	230	220	220	210
29	270	280	310	280	240	240	250	240	240	B	B	B
30	220	260	250	205	200	250	240	220	220	220	C	220
Count	28	27	27	27	28	28	27	26	27	27	27	28
Median	250	250	240	225	230	250	250	240	220	220	210	205
Mean	255	255	245	235	235	255	250	235	225	215	210	205

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h<sub>p</sub>F  
Unit : Km  
Month : April, 1960

TABLE 41 (Contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
230	230	B	B	270	285	340	C	C	C	C	C	1
215	205	C	230	240	260	280	285	265	260	240	245	2
205	205	205 <sub>H</sub>	230	230 <sub>H</sub>	260	285	300	280	260	240	240	3
190	200 <sub>H</sub>	215	C	235	260	330	C	F	235	265	F	4
U220B	210	205	235	240	260	320	F	U440F	U320F	310	300	5
200	200	230	230	245	270	330	U370F	F	F	260	270	6
200	205	215	225	240	270	345	F	U390F	F	U260F	260	7
200	U220A	220	220	235	265	310	F	F	F	F	255	8
205	210	210	225	240	275	325 <sub>H</sub>	F	F	F	F	225	9
205	205	210	235	250	270	340	350	280	270	260	240	10
210	205 <sub>H</sub>	205 <sub>H</sub>	225	240	275	335	F	U360F	U325F	270	245	11
220 <sub>H</sub>	215	B	240	260	270	335	U385F	340	U320F	300F	280	12
215 <sub>H</sub>	210 <sub>H</sub>	A	235	255	275	335	U405F	F	U280F	245	240	13
200 <sub>H</sub>	200 <sub>H</sub>	200	220	250	260	340	380F	F	280	260	250	14
210	215	220	235	245	270	325	F	U340F	325F	U280F	275	15
200	205	U210A	235	245	270	350	F	F	310	300	280	16
205	205	U220A	230	250	275	345	450	420	360	285	260	17
205	215	210	220	245	270	350	430	460F	370	280	235	18
200	C	200 <sub>H</sub>	220 <sub>H</sub>	245	270	360	F	F	F	260	245	19
195	200	200 <sub>H</sub>	240 <sub>H</sub>	250	270	360	F	F	F	U250F	240	20
200	200	220	220	240	270	360	F	C	C	C	C	21
215	215	220	205 <sub>H</sub>	240	270	340	410	440	320	280	260	22
200	200	200	240	240	255 <sub>H</sub>	340	420	400	F	270F	250	23
210	220	220	230	240	265	325	C	C	315	285	280	24
210	220	220	U245A	250	C	330	380F	340	330	300	265	25
200	220	220	220	240	260	330	360	380	320	280	240	26
195	200	220	230	245	260	310	340	320	320	270	240	27
200	205	220	225	240	270	305	290	260	245	270	260	28
220	200	220	240	240	270	320	340	280	260	240	225	29
210	210	200	220	240	260	U280H	400	320	240	200	240	30
30	29	26	28	30	29	30	17	18	21	26	27	Count
205	205	215	230	240	270	330	380	340	315	270	250	Median
205	210	215	230	245	270	330	370	350	300	270	255	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km

Month : April, 1960

TABLE 42  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1							C	110	A	A	A	A
2								C	C	C	C	A
3								105	A	A	105	B
4								120	A	A	A	A
5								B	B	B	B	B
6								120	A	A	A	A
7								A	A	A	A	A
8								A	A	A	A	A
9								110	A	A	A	A
10								A	A	A	A	A
11								115	A	A	A	A
12								125	A	A	A	A
13								A	A	A	A	A
14								120	110	A	A	A
15								130	A	A	A	A
16								A	A	A	A	A
17								110	A	A	A	A
18								120	110	A	A	A
19								115	110	110	A	A
20								110	A	A	A	A
21							C	120	110	A	A	A
22								C	120	120	A	120
23								120	110	A	A	A
24								120	120	110	A	A
25								120	110	A	A	B
26							140H	C	C	A	A	A
27								A	A	A	A	A
28								120	110	A	A	A
29								120	B	B	B	B
30								110	110	120	C	C

Count	1	20	10	4	1	1
Median	..	120	110	..	..	..
Mean	..	115	110	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km

Month : April, 1960

TABLE 42 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
120	120	B	B	B								1
B	A	B	C	A	A							2
A	110	A	A	A								3
A	A	B	B	A								4
B	B	A	A	A								5
A	A	115	120	A								6
A	A	A	A	A	A							7
A	A	110	110	110	A							8
A	A	A	110	B	A							9
A	A	A	A	110	A							10
A	A	A	A	110								11
A	A	A	115	A	A							12
A	A	A	A	A								13
A	C	A	A	A	120							14
					120							15
A	A	A	A	A	A							16
A	A	A	A	A								17
A	A	A	A	120	120							18
A	A	115	110	120	120							19
A	A	A	105	110	120							20
A	A	A	A	A								21
110	A	110	110	110								22
A	A	115	120	110								23
A	A	A	110	110								24
B	A	120	A	A	C							25
A	A	A	A	A	A							26
A	A	A	A	A	A							27
A	A	A	105	110								28
B	120	A	110	110	120							29
A	A	A	A	A	110							30
..	2	3	7	11	11	7						Count
..	..	..	115	110	110	120						Median
..	..	..	115	110	110	120						Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km

Month : April, 1960

TABLE 42 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2° N

Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							125	A	A	A	A	A
2							C	C	C	C	B	A
3								105	A	A	B	A
4								115	A	A	A	A
5								B	B	B	B	B
6								120	A	A	A	A
7								A	A	A	A	A
8							130	A	A	A	A	A
9								A	A	A	A	A
10							A	A	A	A	A	A
11								115	A	A	A	A
12								125	A	A	A	A
13								A	A	A	A	A
14							130	120	A	A	A	A
15								A	A	A	A	A
16							130	A	A	A	A	A
17							150	A	A	A	A	A
18							120	120	A	A	A	A
19							120	110	110	A	A	A
20							120	A	A	A	A	A
21							120	110	A	A	A	A
22							C	C	A	A	A	A
23								120	A	110	A	A
24								120	B	A	A	A
25								130	110	A	B	B
26							C	C	110	A	A	A
27							120	A	A	A	A	A
28								120	A	A	A	A
29							120	B	B	B	B	B
30							120	110	110	A	C	A

Count	12	14	4	1	..	..
Median	120	120	..	..	..	..
Mean	125	115	..	..	..	..

Sweep 4.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km.

Month : April 1960

TABLE 42 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	B	B									1
B	A	C	A	A								2
A	105	A	A	A								3
A	A	A	C	115								4
B	B	A	A	A								5
A	A	A	A	110								6
A	A	A	A	A								7
A	A	115	110	A								8
A	A	110	105	110								9
A	A	A	105	110	A							10
A	A	A	105	A								11
A	A	B	A	A								12
A	A	115	A	A								13
A	A	A	A	B								14
A	A	A	A	115								15
A	A	A	A	A								16
A	A	A	A	A								17
A	A	A	110	A								18
A	C	120	115	120								19
A	A	A	105	110								20
110	A	120	110	120								21
A	110	110	120	120								22
A	110	120	110	110								23
A	A	A	A	A								24
B	120	120	A	A	C							25
A	A	A	A	A	A							26
A	A	A	A	A								27
A	A	105	110	100								28
120	A	A	110	110								29
A	A	A	A	A								30
2	4	9	12	12	..							Count
..	..	115	110	110	..							Median
..	..	115	110	110	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : h'Es

Unit : Km

Month : April 1960

TABLE 43  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								G	100	100	100	100
2	C	C	C	C	C	C	C	C	C	C	C	100
3		120						G	100	100	125	100
4	105							G	100	100	100	100
5	160					105		G	B	100	100	100
6								100	100	100	100	100
7		105		110				105	100	100	100	100
8	115							100	100	100	100	100
9	100							G	100	100	100	100
10								100	100	100	100	100
11				110				G	100	100	100	100
12				145				100	100	100	100	100
13								100	100	100	100	100
14						100		G	130	100	100	100
15		115	115	105	100			100	100	100	100	100
16	110							100	100	100	100	100
17				C	100			100	100	100	100	100
18								100	100	100	100	100
19								100	100	100	100	100
20	120							G	100	100	100	100
21								100	100	100	100	100
22	C	C	C	C	C	C	C	C	100	100	100	100
23								100	100	100	100	100
24				C				G	G	100	100	100
25						105		100	100	100	100	100
26								C	C	100	100	100
27							G	100	100	100	100	100
28								110	G	100	100	100
29								G	100	100	100	100
30			100					120	G	G	C	C

Count	6	3	2	4	2	3	..	17	24	28	28	29
Median	110	..	..	..	..	..	..	100	100	100	100	100
Mean	120	..	..	..	..	..	..	100	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : April 1960

TABLE 43 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
100	G	B	B	100	100							1
100	100	100	C	100	100	105	C	C	C	C	C	2
100	G	100	100	100	100			100	125	125	125	3
100	100	100	100	100	105			C			105	4
100	100	100	100	100	100							5
100	100	100	G	100	100				120	110	115	6
100	100	100	100	100	100							7
100	100	120	120	120	100							8
100	100	100	G	100	100							9
100	100	100	100	100	100							10
100	100	100	100	100	105				120			11
100	100	100	G	105	105				120	115	115	12
100	100	120	100	100	105						110	13
100	100	100	100	100	G				130			14
100	100	100	100	100	100					115	120	15
100	100	100	100	100	100							16
100	100	100	100	100	100						110	17
100	100	100	100	100	100							18
100	100	100	100	100	115							19
100	100	100	100	100	105	C			130			20
100	100	100	100	100	110			C	C	C	C	21
100	100	100	100	100	100							22
100	100	100	G	100	100							23
100	100	100	100	100	100		C	C	125			24
100	100	100	100	100	C				130	100	120	25
100	100	100	110	110	100							26
100	100	100	100	100	100						105	27
100	100	100	100	G	120			100	100	110		28
100	100	100	100	100	100				130	C		29
100	100	100	100	100	105				120	130		30
											120	
30	28	29	24	29	28	1	..	2	11	7	10	Count
100	100	100	100	100	100	..	..	..	125	115	115	Median
100	100	100	100	100	105	..	..	..	125	115	115	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic :  $f^oF_2$ 

Unit : Km

Month : April 1960

TABLE 43. (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							G	100	100	100	100	100
2	C	C	C	C	C	C	C	C	C	C	100	100
3	115	115						100	100	100	B	100
4	105							105	100	100	100	100
5					110			B	B	100	100	100
6			115					100	100	100	100	100
7	115	105	100	105				105	100	100	100	100
8							125	100	100	100	100	100
9								100	100	100	100	100
10							100	100	100	100	100	100
11								G	100	100	100	100
12								100	100	100	100	100
13								100	100	100	100	100
14							G	120	100	100	100	100
15		110	110	100	100		100	100	100	100	100	100
16							G	100	100	100	100	100
17			105	105			G	100	C	100	100	100
18							G	100	100	100	100	100
19							G	100	100	100	100	100
20							G	100	100	100	100	100
21							G	100	100	100	100	100
22	C	C	C	C	C	C	C	C	100	100	100	100
23								100	100	100	100	100
24				C				G	100	100	100	100
25								100	100	100	100	100
26							C	C	100	100	100	100
27							G	100	100	100	100	100
28								G	100	100	100	100
29							G	G	100	100	100	100
30							G	G	G	100	C	100

Count	3	3	4	3	2	..	3	21	26	29	28	30
Median	..	..	..	..	..	..	..	100	100	100	100	100
Mean	..	..	..	..	..	..	..	100	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E<sub>s</sub>

Unit : Km

Month : April 1960

TABLE 43 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
100	100	B	B	100			C	C	C	C	C	1
100	100	C	100	100	105				140	140		2
100	G	100	100	100			100					3
100	100	100	C	105			C				105	4
100	100	100	100	100								5
100	100	100	100	100	100			125	115	120	110	6
100	100	100	100	100							100	7
100	100	120	120	100								8
100	100	G	100	100			130				120	9
100	100	100	100	100	100							10
100	100	100	100	105				130	120	105		11
100	100	B	105	105	160				100	110		12
100	100	115	100	100					115	135		13
100	100	100	100	G					120			14
100	100	100	100	110						115	115	15
100	100	100	100	100	115							16
100	100	100	100	100								17
100	100	100	100	100	120							18
100	C	100	100	105	115						115	19
100	100	100	100	100	115							20
100	100	100	100	100				C	C	C	C	21
100	100	100	100	100						120		22
100	100	G	100	100								23
100	100	100	100	100			C	C				24
100	100	100	100	100	C			140	125			25
100	100	100	110	110	100				110			26
100	100	100	100	100	100				110			27
100	100	100	G	G	110		120	100	C			28
100	100	100	100	100	110				120			29
100	100	100	100	100	110							30
30	28	25	27	28	13	..	3	4	10	7	6	Count
100	100	100	100	100	110	..	..	..	120	120	110	Median
100	100	100	100	100	110	..	..	..	120	120	110	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M 3000)F2

TABLE 44

Latitude : 10°2'N

Unit : ...

Ionospheric Data

Longitude : 77°5'E

Month : April 1960

75°0'E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	2.80	2.70	2.20	3.00	E	E	2.65	3.00	2.50	2.75	2.35	U2.25R
2	C	C	C	C	C	C	C	C	C	C	C	2.50
3	3.00	3.15	3.30	3.35	3.50	E	3.40	3.40	3.20	2.80	2.45	2.10
4	2.90	3.00	3.20	3.25	3.40	3.50	3.30	3.30	2.90	2.50	2.30	2.40
5	U3.00F	U3.15F	U3.25F	F	F	F	F	3.10F	2.80	2.40	2.50	2.50
6	F	F	F	F	U3.25F	F	U3.20F	3.05	2.80	2.35	2.30	2.30
7	3.10	3.30	3.35	3.15	2.70	2.45	3.20	2.90	2.65	2.20	2.45	2.30
8	F	F	F	F	F	F	F	U3.00F	2.60	2.45	2.35	2.30
9	F	F	F	2.90	3.25	3.45	3.05	2.90	2.65	2.30	2.30	2.40
10	Fs	Fs	Fs	F	3.40	U3.40F	3.10	2.75	2.45	2.40	2.30	2.55
11	3.20	3.20	3.15	3.30	3.25	3.30	3.10	3.20	2.90	2.45	2.40	2.40
12	F	U2.85F	U2.90F	3.10	3.15	3.40	3.10	3.10	3.00	2.40H	2.25H	2.20
13	U3.00F	3.10	F	F	F	3.40	3.15	2.90	2.40	2.45	2.30	2.50
14	F	F	3.10	3.20	3.30	3.40	3.30	3.35	3.10	2.80	2.40	U2.15RH
15	F	F	F	3.30F	3.30	3.30	3.20	3.10	2.85	2.35	2.15	2.60
16	2.95	F	F	3.10	3.30	3.50F	3.30	3.15	2.85	2.50	R	2.35
17	2.50	3.00	3.00	C	2.95	3.20	3.00	2.90	2.70	2.45	2.20	2.20
18	3.10	F	U3.05s	3.10	3.00	2.95	3.15	2.95	2.50	2.40	2.35	2.35
19	3.00	3.00	3.00	3.00	3.30	3.30	3.20	3.05	2.70	2.45	RH	2.35
20	3.00	3.10	F	3.20	3.30	3.50F	3.25	3.10	2.80	2.40	2.35	2.35
21	F	F	2.95	F	3.20	3.30	3.20	3.00	2.65	2.25	2.35	2.35
22	C	C	C	C	C	C	C	C	U2.70s	2.25	2.35	2.25
23	F	U2.90s	F	3.10	U3.25Fs	F	U3.20F	3.10	2.70	2.20H	2.35	2.35
24	3.00	F	F	C	3.30	2.75	3.20	3.10	3.00	2.70	2.30	WH
25	3.05	2.95	2.95	3.20	3.10	2.95	3.15	3.20	3.00	2.70	2.25	2.25
26	U2.80s	2.80	2.90	3.10	3.15	U3.35s	3.05	C	C	2.35	2.20	2.40
27	U3.00s	2.95	U3.05F	3.10	3.30	3.40H	3.10	2.90	2.60	2.35	2.45	2.40
28	3.10	3.20	3.50	3.35	3.40	E	3.30	3.40	3.15	2.70	2.55	2.15
29	3.00	U2.90s	2.70	2.70	3.00	3.25	3.10	3.10	3.00	2.50	2.50	2.45
30	3.20	U3.00s	3.10	3.30	3.40	3.70	3.40	3.30	U3.10s	2.95	C	C
Count												
Median												
Mean												

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M3000)F2

TABLE 44 (Contd.)

Latitude : 10°2'N

Unit : ..

Ionospheric Data

Longitude : 77°5'E

Month : April 1960

75°0'E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
2.50	2.40	B	2.40	2.40	2.20 <sub>H</sub>	2.00 <sub>H</sub>	C	C	C	C	C	1
2.40	2.45	2.45	C	2.25	2.20	2.35	2.50	2.55	2.65	2.65	2.85	2
2.40	2.55	2.45	2.50	2.40 <sub>H</sub>	2.35 <sub>H</sub>	2.30	2.25	2.35 <sub>H</sub>	2.60	2.75	2.85	3
2.40	2.45	2.45	2.40	2.60	2.60	2.45	2.25	C	F	F	F	4
2.30	2.30	2.40	2.35	2.30	2.35	2.30	2.25	F	F	F	F	5
2.40	2.30	2.35	2.50	2.60	2.65	2.45	2.30	F	F	F	2.90	6
2.30	2.25	2.30	2.35	2.35	2.35	2.20	U2.05 <sub>F</sub>	F	F	F	F	7
2.20	2.35	2.40	2.55	2.55	2.55	2.40	2.30	F	F	F	F	8
2.35	2.40	2.30	2.40	2.40	2.35	2.30	2.05	F	F	F	F	9
2.30	2.45	2.35	2.40	2.45	2.40	2.30	2.15	2.25	2.55	2.75	3.05	10
2.40	2.35	2.30	2.40	2.55	2.50	2.40	2.20	2.20	F	2.60	U2.70 <sub>F</sub>	11
2.25	2.30	2.40	2.50	2.60	2.60	2.50 <sub>H</sub>	2.30	2.35	2.60	2.80	2.90	12
2.40	2.40	2.45	2.50	2.40	2.35 <sub>H</sub>	2.10	2.00	F	U2.30 <sub>F</sub>	U2.65 <sub>F</sub>	U3.00 <sub>F</sub>	13
2.30	2.35	2.40	2.30	2.40	2.40	2.35	2.10	F	F	F	F	14
2.40	2.35	2.25	2.25	2.40	2.35	2.40	U2.25 <sub>R</sub>	2.35	2.50	2.65	2.75	15
2.25	2.25	2.20	2.25	2.25	U2.30 <sub>S</sub>	2.20	2.00	F	F	F	F	16
2.25	2.20	2.20	2.30	2.40	2.35	2.25	2.05	F	F	F	F	17
2.30	2.35	2.30	2.30	2.25	2.15	2.10	U2.10 <sub>F</sub>	2.10 <sub>F</sub>	2.20	F	2.80	18
2.35	2.25	2.30	2.35	2.30	2.35	2.15	F	F	F	F	U3.05 <sub>S</sub>	19
2.35	2.20	2.15	2.25	2.30	2.30	C	U2.05 <sub>S</sub>	F	F	F	F	20
2.30	2.20	2.25	2.30	2.30	2.30	2.10	1.85 <sub>W</sub>	C	C	C	C	21
2.20	2.35	2.40	2.45	2.45	2.40	2.20	F	F	F	F	F	22
2.40	2.35	2.30	2.45	2.50	2.50	2.30 <sub>H</sub>	2.10	F	F	F	F	23
2.20	2.20	2.35	2.35	2.45	2.35	2.40	C	C	2.45	2.60	2.90	24
2.35	2.35	2.35	2.40	2.45	C	2.25	U2.10 <sub>S</sub>	F	2.35	U2.50 <sub>FS</sub>	2.85	25
2.35	2.35	2.35	2.50	2.60	U2.60 <sub>R</sub>	2.50	F <sub>S</sub>	U2.20 <sub>F</sub>	F	F	F	26
2.40	2.40	2.50	2.60	2.65	2.70	2.60	2.40	2.35 <sub>F</sub>	U2.50 <sub>F</sub>	F	U2.85 <sub>S</sub>	27
2.40	2.50	2.40	2.45	2.65	2.60	2.40	2.40	2.60	U2.70 <sub>R</sub>	C	2.90	28
2.30	2.35	2.40	2.40	2.35	U2.15 <sub>S</sub>	2.20	U2.30 <sub>S</sub>	2.40	2.50	U2.80 <sub>S</sub>	U2.90 <sub>S</sub>	29
2.30	2.25	2.40	2.40	2.30	2.40	U2.35 <sub>S</sub>	2.10	2.15	U2.30 <sub>F</sub>	3.20	U2.50 <sub>SH</sub>	30
30	30	29	29	30	29	29	25	12	13	11	16	Count
2.35	2.35	2.35	2.40	2.40	2.35	2.30	2.15	2.35	2.50	2.65	2.90	Median
2.35	2.35	2.35	2.40	2.45	2.40	2.30	2.20	2.30	2.50	2.70	2.85	Mean

Sweep 1.0 Mc, in 25.0 Mc, in 27 seconds.

Characteristic : (M3000)F2

TABLE 44 (Contd.)

Latitude : 10°2'N

Unit : ...

Ionospheric Data

Longitude : 77°5'E

Month : April 1960

75°0'E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	2.85	2.40	2.30	3.25 <sup>H</sup>	E	2.30	2.85	2.65	2.05 <sup>H</sup>	2.85	2.35 <sup>R</sup>	2.40
2	C	C	C	C	C	C	C	C	C	C	2.55	2.45
3	3.10	3.20	3.30	3.40	3.55	2.80	3.40	3.30	3.00	2.60	2.30	2.30
4	3.00	3.10	3.15	3.30	3.40	3.50	3.30	3.10	2.80	2.30	2.35	2.45
5	F	F	F	F	F	F	3.20	3.00	2.45	2.40	2.55	2.35
6	F	F	F	F	F	F	3.05 <sup>F</sup>	2.90	2.60	2.10	2.40	2.35
7	3.15	3.25	3.30	3.00	2.60	2.90	3.05	2.80	2.45	2.30	2.40	2.25
8	F	F	F	2.65 <sup>F</sup>	F	F	3.10 <sup>F</sup>	2.80	2.45	2.40	2.35	2.25
9	F	F	F	3.15	3.35	3.15	3.00	2.85	2.45	2.25	2.40	2.35
10	F	F	3.05 <sup>F</sup>	F	3.50 <sup>F</sup>	2.95 <sup>FH</sup>	3.00	2.65	2.35	2.25	2.55	2.40
11	3.20	3.10	3.15	3.40	3.20	2.70	3.15	3.00	2.60	2.05 <sup>H</sup>	2.40	2.35
12	2.90 <sup>F</sup>	2.80 <sup>F</sup>	3.00	3.15 <sup>F</sup>	3.20	3.30	3.20	3.10	2.70	2.25 <sup>H</sup>	2.35	2.30
13	3.05	3.10	F	F	3.40 <sup>F</sup>	2.85	3.05	2.60	2.50	2.35	2.45	2.50
14	F	3.20 <sup>s</sup>	3.20	3.25	3.30	3.05	3.40	3.25	2.95	2.60	2.30	2.10 <sup>H</sup>
15	F	F	F	3.25	3.30	3.30	3.15	3.10	2.55	2.05	2.50	2.45
16	3.00	F	3.05	3.20 <sup>s</sup>	F	3.15	3.20	3.05	2.70	2.30	2.30	2.15
17	2.85	3.00	2.90	2.85	3.20	3.00	3.05	2.80	C	2.25	2.15	2.30
18	3.00	3.00	F	3.10	2.90	3.10	3.15	2.75	2.30	2.40	2.40	2.25
19	3.00	3.05	3.00	3.10	3.20	3.20	3.15	2.95	2.60	2.20	2.30	2.40
20	3.10 <sup>F</sup>	3.10	3.10	3.20	3.30	3.30 <sup>F</sup>	3.25	2.95	2.50	2.30	2.30	2.35
21	F	F	F	F	3.25	2.85	3.10	2.80	2.45	2.30	2.30	2.30
22	C	C	C	C	C	C	C	C	2.50	2.40	2.35	2.25
23	F	F	F	F	F	F	3.20 <sup>s</sup>	2.90	2.50 <sup>H</sup>	2.30	2.35	2.30
24	F	F	3.30	C	2.80 <sup>H</sup>	2.95	3.30	3.10	2.95	2.45	2.10	2.15
25	3.00	2.90	3.00	3.30	3.05	3.10	3.30	3.20	2.85	2.50	2.05 <sup>H</sup>	2.20
26	2.80	2.90	3.05	3.10	3.25	3.00	C	C	2.55	2.15 <sup>R</sup>	2.40	2.35
27	2.90	3.00 <sup>FS</sup>	F	3.30	3.40	3.10	3.05	2.80	2.40	2.45	2.50	2.50
28	3.10	3.30	3.50	3.35	3.40	3.20	3.40	3.30	2.95	2.70	2.35	2.00 <sup>H</sup>
29	2.90	2.80	2.65	2.75	3.10	3.10	3.20	3.10	2.75	2.20 <sup>RH</sup>	2.50	2.40
30	3.10	3.00 <sup>s</sup>	3.15	3.50	3.60	2.90	3.35	3.10	3.00	2.85	C	2.40
Count	18	18	18	21	22	24	27	27	29	29	29	30
Median	3.00	3.00	3.10	3.20	3.30	3.10	3.15	2.95	2.55	2.30	2.35	2.35
Mean	3.00	3.00	3.05	3.15	3.25	3.05	3.15	2.95	2.60	2.35	2.35	2.30

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M3000)F2

TABLE 44 (Contd.)

Latitude : 10°2'N

Unit : ...

Ionospheric Data

Longitude : 77°5'E

Month : April, 1960

75°0'E Mean Time

Date : April 20

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
U2.40w	2.25	R	2.45	2.25	2.10H	1.95	C	C	C	C	C	1
2.40	2.50	C	2.25	2.20	2.35	2.45	2.50	2.55	2.55	2.70	2.90	2
2.50	2.45	2.50	2.45H	2.35	2.25	2.25	2.35H	2.50	2.65	2.85	2.90	3
2.40	2.45	2.40	C	2.60	2.50	2.35	C	F	F	F	F	4
2.30	2.30	2.40	2.35	2.35	2.35	2.30	2.10	F	F	F	F	5
2.35	2.40	2.45	2.55	2.60	2.55	2.35	F	F	F	F	3.05	6
2.30	2.30	2.40	2.40	2.40	2.30	2.10	F	F	F	F	F	7
2.25	2.40	2.50	2.55	2.60	2.60	2.40	F	F	F	F	3.05	8
2.40	2.30	2.30	2.40	2.40	2.40	2.15	F	F	F	F	Fs	9
2.40	2.40	2.40	2.45	2.50	2.40	2.15	2.15	2.40	2.60	2.95	3.10	10
2.35	2.35	2.35	2.50	2.50	2.40	2.30	2.20	U2.30F	2.50F	U2.70s	F	11
2.25	2.30	2.45	2.55	2.60	2.50H	2.40	2.30	2.40	2.65	U2.80F	2.95	12
2.40	2.40	2.50	2.45	2.40	2.20	2.05	F	F	U2.45F	F	F	13
2.30	U2.40s	2.35	2.35	2.40	U2.40R	U2.25s	F	F	F	F	F	14
2.30	2.20	2.25	2.30	2.35	2.35	2.35	U2.35R	2.40	2.60	2.70	U3.00s	15
2.20	2.20	2.20	2.30	2.25	U2.30s	2.15	F	F	F	U2.60F	2.70	16
2.20	2.20	2.30	2.35	2.35	2.30	U2.15s	2.05	F	2.20	F	2.85	17
2.35	2.35	2.35	2.25	2.20	U2.15s	U2.10s	2.05F	F	F	U2.60F	2.90	18
2.30	C	2.30	2.35	2.30	2.25	U2.05s	F	F	F	U2.60F	F	19
2.30	2.15	2.20	2.30	2.25	2.35	2.10	F	F	F	F	3.15	20
2.25	2.20	2.30	2.45	2.35	2.25	2.00	F	C	C	C	C	21
2.30	2.35	2.40	2.45	2.45	2.35	2.10	F	F	F	F	F	22
2.40	2.35	2.40	2.50	2.50	2.45	2.20	F	F	F	F	F	23
2.15	2.30	2.35	2.45	2.35	2.40	2.45	C	C	2.55	2.85	3.00	24
2.40	2.35	2.30	2.45	2.40	C	2.20	F	U2.25F	F	U2.75s	U2.80s	25
2.40	2.30	2.50	2.55	2.65	2.60	2.35	U2.25F	F	F	F	U3.00s	26
2.40	2.40	2.55	2.60	2.70	2.60	2.40	2.30	2.40F	F	U2.70F	3.00	27
2.45	2.50	2.45	2.65	2.65	U2.60R	2.35	2.50	2.65	2.80	2.85	2.90	28
2.25	2.40	2.35	2.40	2.25	2.15	2.20	2.30	2.45	2.60	U2.80s	3.00s	29
2.20	2.40	2.40	2.30	2.30	2.40	U2.25s	2.10F	S	U2.75s	3.30	2.60	30
30	29	28	29	30	29	20	14	10	12	15	18	Count
2.30	2.35	2.40	2.45	2.40	2.35	2.20	2.30	2.40	2.60	2.75	3.00	Median
2.35	2.35	2.40	2.45	2.40	2.35	2.25	2.25	2.45	2.60	2.80	2.95	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds,



Characteristic : foF2

Unit : Mc

Month : May, 1960

TABLE 45  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	11.2	5.9	16.4 <sub>F</sub>	F	F	E	6.5	9.4	10.6	11.4	11.2	11.2
2	8.1	7.8	7.8	9.1	9.9	7.9	8.6	10.4	12.2	12.7	11.4	11.4
3	10.2 <sub>F</sub>	8.3	8.6	8.8	8.8	7.2	8.5	10.6	12.2	12.2	11.8	C
4	F	F	10.1	8.6	6.5	4.1	7.3	10.2	11.0	11.7	11.0	11.3
5	F	F	F	F	U6.9 <sub>F</sub>	6.6	8.5	10.2	11.4	10.8	10.1	10.2
6	U10.8 <sub>F</sub>	10.4	9.9	9.0	7.5	5.5	6.9	9.4	10.8	10.0	9.5	9.9
7	U10.5 <sub>F</sub>	10.5	9.5	9.2	8.1	7.9	9.7 <sub>H</sub>	10.3 <sub>H</sub>	10.8	12.0	11.8	11.1
8	10.8	10.3	10.3	9.6	7.2	5.2	8.2	10.4	11.4	11.3	10.6	10.9
9	F	U6.8 <sub>S</sub>	F	F <sub>S</sub>	F	4.8	7.6	10.2	11.8	12.4	12.5	12.5
10	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	4.2	2.8	C	C	C	C	C	C
13	11.3	10.0	9.7	9.7	6.9	4.3	7.7	10.6	11.5	11.5	10.4	B
14	F	F	F	F	7.2	5.2	7.2	10.0	11.8	11.5	9.9	9.8
15	9.9	8.9	9.0	8.9	8.4	6.3	8.0	10.3	11.5	12.6	11.8	11.1
16	10.0	8.9	8.6	8.6	8.6	6.5	8.0	10.0	11.3	11.4	10.3	9.9
17	U7.3 <sub>F</sub>	F	F	F	U5.7 <sub>F</sub>	6.2	U7.7 <sub>F</sub>	10.7	11.6	11.9	12.3	11.4
18	10.0	9.1	8.0	7.0	4.8	3.6	7.0	9.7	11.0	11.3	11.0	10.6
19	F	F	F	F	F	5.4	7.4	9.6	10.9	11.1	10.5	11.2
20	F	F	F	F	F	F	U8.7 <sub>F</sub>	10.3	11.5	11.1 <sub>H</sub>	9.6	9.4
21	8.8	8.1	8.3	8.4	8.0	5.3	7.5	9.3	10.6	10.5	9.6	9.3
22	7.6	7.0	6.8	C	C	C	C	C	C	C	9.6	9.8
23	F	7.6	7.2	6.6	6.8	5.5	7.0	9.7	9.9	9.8	9.0	9.4
24	F	C	C	C	C	C	C	C	C	11.6	11.8	11.0
25	10.8	9.2	7.6	7.6	U6.4 <sub>SH</sub>	2.8 <sub>H</sub>	6.9	9.9	11.4	11.8	11.8	12.2
26	F	F	F	F	U5.3 <sub>F</sub>	3.4	6.6	9.2	10.9	11.4	10.8	10.8
27	F	8.0	6.8	U6.2 <sub>S</sub>	6.0	4.2	7.1	9.6	10.3	11.4	11.8	12.1
28	6.8	U5.1 <sub>S</sub>	F	F	F	4.2	7.4	10.0	11.6	11.8	11.1	10.4
29	F	8.4	U8.0 <sub>F</sub>	5.6	4.2	F <sub>H</sub>	U7.1 <sub>S</sub>	9.0	10.0	11.3	11.4	11.3 <sub>H</sub>
30	F	F	F	F	F	F	U7.0 <sub>F</sub>	9.9	11.2	11.8	C	C
31	10.8	9.8	8.5	7.9	7.0	6.8	6.7	9.6	11.0	11.8	11.7	11.0
Count	16	19	18	16	21	24	26	26	26	27	27	25
Median	10.1	8.4	8.4	8.6	6.9	5.2	7.4	10.0	11.2	11.5	11.0	11.0
Mean	9.7	8.4	8.4	8.2	6.9	5.3	7.6	10.0	11.2	11.5	10.9	10.8

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF2

Unit : Mc

Month : May, 1960

TABLE 45 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
10.8	11.0	11.4	11.0	10.9	10.7	9.6	9.0	7.9	F	8.5	8.6	1
11.3	11.0	10.8	11.2	11.8	12.2	12.2	10.8	10.6	10.2	F	10.2	2
C	10.6	10.4	10.4	10.6	10.4	10.4	9.5	F	F	F	F	3
11.4	11.8	12.7	13.1	13.3	13.5	12.8	10.8	F	F	F	F	4
10.7	11.0	11.6	12.4	12.7	12.6	12.6	11.4	C	C	F	F	5
9.8	10.1	10.5	10.2	10.7	11.0	C	10.4	F	F	U8.5s	F	6
11.7	12.2	13.3	13.8	13.8	14.0	13.6	C	C	11.9	12.5	11.7	7
11.5	12.0	12.3	12.1	13.1	13.5	12.7	F	F	F	F	F	8
12.7	13.1	C	C	C	C	C	C	C	C	C	C	9
C	C	C	C	C	C	C	C	C	C	C	C	10
C	C	C	C	14.3	C	C	C	10.8	C	C	12.9	11
C	12.3	12.9	13.8	14.6	14.2H	13.8H	U12.2H	U9.8F	10.7	C	12.1	12
10.8	11.0	10.9	11.2	11.8	12.3	12.4	U11.1F	F	F	U11.0F	F	13
10.1	9.9	10.0	10.7	11.6	12.0	11.8	11.6	11.0	U11.6s	11.8	11.6	14
10.7	10.5	10.4	10.6	10.6	10.8	11.2	11.1	10.5	U9.8F	10.0	10.5	15
9.9	10.4	10.6	10.7	11.0	11.4	11.6	10.8	U10.0F	10.4	10.4F	F	16
11.8	13.2	14.0	14.2	14.3	14.7	14.0	12.7	F	F	F	F	17
C	11.7	11.8	12.2	12.4	12.6	12.5	U11.6s	F	F	F	F	18
11.8	12.6	12.8	13.7	13.8	14.2	13.6	11.7	F	F	F	F	19
9.7	9.7	10.4	C	11.5	11.7	12.8	12.2	11.5	10.7	10.2	9.5	20
9.1	9.4	9.8	10.4	A	12.3	12.0	C	10.6	F	9.1	8.7	21
10.0	10.0	10.0	10.5	10.6	10.9	11.1	10.6	F	F	F	F	22
9.6	C	C	9.8	10.6	11.0	11.3	C	10.8	F	F	F	23
10.2	C	C	C	C	U12.2s	11.5	C	11.0	11.2	U12.0s	U11.6s	24
12.6	12.7	12.6	11.8	11.6	10.8	10.5	U9.4s	F	F	F	F	25
10.6	9.8	10.2	10.3	10.5	10.6	11.0	10.6	10.2	9.7	F	F	26
11.1H	U10.4W	9.4	9.5	10.1	10.8	11.4	10.9	U9.6s	8.9	F	8.0	27
10.3	10.5	11.0	11.2	11.6	12.6	U12.2s	U11.9s	10.8	U10.0F	F	F	28
9.9	9.6	10.2	10.9	11.7	13.0	12.7	11.6	F	U9.0s	F	F	29
11.6	10.8	10.7	10.8	10.7	11.4	11.6	11.8	11.4	F	10.8	11.4	30
10.5	10.3	10.7	10.7	11.3	12.2	12.8	U12.0s	11.1	U10.3F	10.2	10.3	31
26	27	26	26	27	28	27	23	16	13	13	13	Count
10.7	10.8	10.8	11.0	11.6	12.2	12.2	11.1	10.7	10.3	10.4	10.5	Median
10.8	11.0	11.2	11.4	11.9	12.1	12.1	11.1	10.5	10.3	10.5	10.5	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF2

Unit : Mc

Month : May, 1960

TABLE 45 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	9.0	6.2	F	F	E	4.2	8.1	10.2	11.0	11.0	11.2	11.0
2	8.0	7.6	8.1	9.6	9.1	7.6	9.6	11.7	12.7	12.4H	11.4	11.4
3	9.2	8.4	8.8	8.9	8.6	6.7	9.6	11.6	12.2	12.1	11.4	11.3
4	F	10.3	9.5	7.8	5.1	5.4H	8.8	10.9	11.6	11.0	11.1	11.4
5	F	F	F	U7.3F	6.8	7.0	9.4	11.0	11.2	10.3	10.1	10.4
6	10.7	10.5	9.3	8.1	6.4	5.6	8.4	10.3	10.7	9.2	9.8	9.9
7	10.5	10.1	9.9	8.5	7.8	8.2H	10.3H	10.7	11.3	12.2	11.3	11.5
8	10.5	10.4	10.2	8.1	5.8	6.1	9.7	11.0	11.3	11.0	10.6	11.3
9	Fs	F	Fs	F	5.3	6.1	8.8	11.1	12.3	12.7	12.3	12.6
10	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	3.2	C	C	11.2	C	C	C	C
13	10.8	9.8	9.6	8.5	5.6	5.7	9.6	11.2	11.8	10.8	B	10.7
14	F	F	F	U7.8F	6.0H	5.7	8.6	10.8	11.7	10.9H	9.7	9.9
15	9.3	8.8	8.9	8.8	7.2	6.4	9.5	11.0	12.0	12.3	11.4	10.8
16	9.3	9.0	8.6	8.7	7.9	6.6	9.4	10.8	11.5	11.6	9.9	10.0
17	U6.5F	F	F	F	U5.7F	6.9	9.4	11.1	11.6	12.4	11.7	11.5
18	F	8.6	7.5	5.8	4.2	5.2	8.4	10.5	11.1	11.2	10.6	10.7
19	F	F	F	F	6.6	5.7	8.8	10.7	11.1	10.8	10.8	11.6
20	F	F	F	F	F	F	9.4	11.0	11.3	10.2	9.6	9.6
21	8.5	7.9	8.2	8.2	7.1	5.6	8.5	10.0	10.7	10.2	9.3	9.2
22	U7.3s	6.8	C	C	C	C	C	C	C	C	9.8	10.0
23	7.6F	7.1	6.8	6.8	6.5	5.6	8.5	9.7	10.0	9.3	9.2	9.4
24	F	C	C	C	C	C	C	C	11.7	12.2	11.6	10.8
25	10.4	8.3	7.5	7.6	3.6	4.9	8.8	10.8	11.8	11.8	12.0	12.4
26	F	F	F	F	4.6	5.0	8.4	10.2	11.1	11.0	11.0	10.8
27	U8.8F	7.1	6.6	U6.1s	5.6	5.5	8.7	10.0	10.8	11.6	12.2	11.6
28	5.8	4.8F	F	F	F	5.6	9.0	11.0	11.6	11.8H	10.6	10.2
29	F	8.2	7.6	4.8	3.8	5.4	8.1	9.3	10.5	11.6	11.4H	11.0H
30	F	F	F	F	F	F	U8.4F	10.2	11.7	12.0	12.5	11.8
31	10.4	9.1	8.3	7.4	6.7	7.1H	8.4	10.2	11.6	11.8	11.4	10.8
Count	17	19	16	18	24	24	26	27	27	27	27	28
Median	9.2	8.4	8.4	8.0	5.9	5.7	8.8	10.8	11.5	11.6	11.1	10.8
Mean	9.0	8.4	8.5	7.7	6.0	6.0	8.9	10.7	11.4	11.3	10.9	10.8

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF2

Unit : Mc

Month : May, 1960

TABLE 45 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
10.9	11.2	11.2	10.8	10.9	10.3	9.5	8.5	F	F	8.8	8.5	1
11.0	11.0	10.8	11.4	12.2	12.2	11.6	10.4	10.2	9.6	U10.2F	11.0	2
11.0	10.4	10.3	10.6	10.4	10.4	10.1	9.0	F	F	F	F	3
11.6	12.2	13.0	13.1	13.4	13.3	12.1	Fs	F	F	F	F	4
10.6	11.3	11.7	12.6	12.6	12.6	12.2	11.0	C	C	F	F	5
9.9	10.0	10.3	10.4	10.7	C	C	9.5	F	F	F	10.3	6
11.8	12.7	13.7	13.9	14.1	13.8	13.2	C	C	12.4	12.0	11.7	7
11.6	12.6	12.0H	12.7	13.3	13.3	11.5	C	F	F	F	F	8
C	C	C	C	C	C	C	C	C	C	C	C	9
C	C	C	C	C	C	C	C	C	C	C	C	10
C	C	C	C	13.8	13.3	U12.4c	C	C	C	12.5	C	11
C	12.5	13.6	14.6	14.2	14.4H	13.1	F	U9.8F	11.0	11.6	12.0	12
11.1	10.9	11.0	11.6	11.8	12.7	11.7	F	F	U11.0F	F	F	13
10.0	9.9	10.3	11.3	11.7	12.0	12.0	11.1	11.0	11.6	U12.0s	10.8	14
10.6	10.5	10.3	10.5	10.7	11.0	11.2	10.8	10.0	9.8	10.4	10.6	15
10.0	10.6	10.7	10.8	11.2	11.4	11.6	10.4	10.0	10.4	F	F	16
12.6	13.9	13.7	14.5	14.6	13.9	13.6	F	F	F	F	10.2	17
11.1	11.9	12.0	12.3	12.4	12.7	U11.9s	F	F	F	F	F	18
12.4	12.8	13.5	13.6	13.9	U14.1s	12.9	11.1	F	F	F	F	19
9.6	10.1	10.6	11.1	11.3	12.0	12.6	U11.9F	11.0	10.4	9.9	8.9	20
9.3	9.6	10.0	10.6	11.6	12.3	12.0	11.0	F	9.2F	9.1	8.3	21
10.0	10.2	10.3	10.6	10.7	11.0	11.0	10.0	F	F	U8.6F	F	22
C	C	9.6	10.2	10.7	11.2	11.2	11.0	10.2	U9.8FS	F	F	23
C	C	C	C	U12.0s	U11.7s	11.4	11.0	11.2	11.8	U12.0s	11.5	24
12.4	12.6	12.6	11.6	10.8	10.8	10.4	U9.0F	F	F	F	F	25
10.2	10.2	9.8	10.4	10.4	11.0	10.8	10.4	9.9	9.8	F	F	26
U10.8w	9.8	9.4	9.8	10.6	11.2	11.4	10.6	9.3	8.8	F	U7.7s	27
10.4	10.7	11.2	11.5	12.2	12.4	U12.0s	11.3	U10.2F	F	F	F	28
9.8	9.8	10.5	11.4	12.6	R	12.0	10.6	F	F	F	F	29
10.8	10.7	10.8	10.8	11.0	11.4	11.8	11.6	11.0	11.0	10.9	11.3	30
10.5	10.7	10.7	10.9	11.7	12.7	12.7	11.4	U10.6F	10.4	10.0	10.4	31
25	26	27	27	29	27	28	21	13	15	13	14	Count
10.8	10.7	10.8	11.3	11.7	12.2	11.8	10.8	10.2	10.4	10.4	10.5	Median
10.8	11.1	11.2	11.6	12.0	12.2	11.8	10.5	10.3	10.5	10.6	10.2	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF1

Unit : Mc

Month : May, 1960

TABLE 46  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
31								L	L	L	L	L
Count								..	1	..	..	..
Median								..	..	..	..	..
Mean								..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF1

Unit : Mc

Month : May, 1960

TABLE 46 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	L	L							1
L	L	L	L	L	L							2
C	L	L	L	L	L							3
L	L	L	L	L	L							4
												5
L	L	L	L	L	L							6
L	L	L	L	L	L							7
L	L	L	L	L	L							8
C	C	C	C	C	C							9
												10
C	C	C	C	C	C							11
C	C	C	C	C	C							12
B	L	L	L	L	L							13
L	L	L	L	L	L							14
												15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
C	L	L	L	L	L							18
L	L	L	L	L	L							19
												20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
L	LH	LH	L	L	L							31
..	..	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF1

TABLE 46 (Contd.)

Latitude : 10.2°N

Unit : Mc

Ionospheric Data

Longitude : 77.5°E

Month : May, 1960

75.0 E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							L	L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4							L	L	L	L	L	L
5								L	L	L	L	L
6							L	L	L	L <sup>LH</sup>	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9							C	C	C	C	C	C
10							C	C	C	C	C	C
11							C	C	C	C	C	C
12							C	C	C	C	C	C
13							C	C	C	C	C	C
14							L	L	L	L	L	L
15							L	L	L	L	L	L
16							L	L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21							C	C	C	C	C	C
22							C	C	C	C	C	C
23							C	C	C	C	C	C
24							C	C	C	C	C	C
25								L	L	L	L	L
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L <sup>LH</sup>
30								L	L	L	L	L
31								L	L	L <sup>LH</sup>	L <sup>LH</sup>	L
Count							..	..	..	..	..	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF1

Unit : Mc

Month : May, 1960

TABLE 46 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L								5
L	L	L	L	L								6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L								11
L	L	L	L	L								12
L	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	L	L	L								16
L	L	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L								26
L	L	L	L	L								27
L	L	L	L	L								28
L	L	L	L	L								29
L	L	L	L	L								30
L	L	L	L	L								31
..	..	..	..	..								Count
..	..	..	..	..								Median
..	..	..	..	..								Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : foE

TABLE 47

Latitude : 10°2'N

Unit : Mc

Ionospheric Data

Longitude : 77°5'E

Month : May, 1960

75°0'E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1							R	A	A	A	A	A
2								2.7	A	A	A	A
3								3.0	A	A	A	C
4							R	A	A	A	A	A
5								A	A	A	A	A
6							2.0	A	A	A	A	A
7								A	A	A	A	A
8								A	A	A	A	A
9							U2.1R	A	A	A	A	A
10							C	C	C	C	C	C
11							C	C	C	C	C	C
12							C	C	C	C	C	C
13							2.1	A	A	A	A	B
14							2.9	A	A	A	A	B
15							2.7	2.9	A	B	B	B
16								A	A	A	A	A
17								A	A	A	A	A
18							2.1	A	A	A	A	A
19								A	A	A	A	A
20							2.1	A	A	A	A	A
21								A	A	A	A	A
22							C	C	C	C	A	A
23							A	A	A	A	A	A
24							C	C	C	A	A	A
25							1.9	2.8	3.3	A	B	A
26								A	A	A	A	A
27							R	2.8	U3.4F	3.7	A	A
28								A	A	A	A	A
29								U3.0R	R	3.7	A	A
30								A	A	A	C	C
31								A	A	A	A	A
Count							8	6	2	2	..	..
Median							2.1	2.8	..	..	..	..
Mean							2.2	2.9	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE

Unit : Mc

Month : May, 1960

TABLE 47 (Contd.)

Ionospheric Data

75.0 E Mean Time

Latitude : 10.2° N

Longitude : 77.5° E

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A	A							1
A	A	A	A	A	A	A						2
C	A	A	A	A	A							3
A	A	A	A	B	A							4
				A								5
A	A	A	A	A	A							6
A	A	A	A	A	A	A						7
A	A	A	A	A	A	A						8
C	C	C	C	C	C	C						9
												10
C	C	C	C	A	C							11
C	C	C	C	A	A							12
B	B	B	B	A	A	A						13
B	A	A	A	A	A	A						14
												15
A	A	A	A	A	A							16
A	A	A	A	A	A	A						17
A	A	A	A	A	A	A						18
A	A	A	A	A	A	A						19
												20
A	A	A	A	A	A							21
A	A	A	A	A	A							22
A	A	A	A	A	A							23
B	A	A	A	A	A							24
												25
A	A	A	A	A	A							26
A	A	A	A	A	A							27
A	A	A	A	A	A							28
A	A	A	A	A	A							29
A	A	A	A	A	A							30
												31
..	..	1	3	3	8							Count
..	..	..	..	..	2.6							Median
..	..	..	..	..	2.6							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE

Unit : Mc

Month : May, 1960

TABLE 47 (Contd.)

Ionospheric Data

75°0' E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							A	A	A	A	A	A
2								2.9	A	A	A	A
3								3.2	A	A	A	A
4							R	A	A	A	A	A
5							2.5	A	A	A	A	A
6							A	A	A	A	A	A
7							A	3.1	A	A	A	A
8							2.5	A	A	A	A	A
9							A	A	A	A	A	A
10							C	C	C	C	C	C
11							C	C	C	C	C	C
12							C	A	C	C	C	C
13							A	A	A	A	B	B
14							A	A	A	A	A	A
15							R	3.2	B	B	B	B
16							A	A	A	A	A	A
17							2.6	A	A	B	A	A
18							A	A	A	A	A	A
19							A	A	A	A	A	A
20							2.5	A	A	A	A	A
21							2.5	A	A	A	A	A
22							C	C	C	C	A	A
23							A	A	A	A	A	A
24							C	C	A	A	A	A
25							B	3.3	A	A	A	A
26							R	A	A	A	A	A
27							2.6A	U3.1R	3.5	A	A	A
28							F	A	A	A	A	A
29							R	U3.3R	U3.5R	A	A	A
30							A	A	A	A	A	A
31							U2.7R	A	A	A	A	A
Count							7	7	2	..	..	..
Median							2.5	3.2	..	..	..	..
Mean							2.6	3.2	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds

Characteristic : foE

Unit : Mc

Month : May, 1960

TABLE 47 (Contd.)

Ionospheric Data

75.0 E Mean Time

Latitude : 10.2° N

Longitude : 77.5° E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	A	A	A								1
A	A	A	A	A	A							2
A	A	A	A	A								3
A	A	A	B	A								4
			3.3	A								5
A	A	A	A	A	C							6
A	A	A	A	A								7
A	A	A	R	A								8
C	C	C	C	C	C							9
C	C	C	C	C	C							10
C	C	C	C	A								11
C	B	A	A	A	A							12
B	B	A	A	R								13
A	A	A	A	A								14
				A								15
A	A	A	A	A								16
A	A	3.7	3.3	2.8								17
A	A	A	A	2.9								18
A	A	3.6	3.3	2.8	A							19
A	A	A	3.4	3.0								20
A	A	A	A	A								21
A	A	A	A	A								22
C	C	A	A	A								23
C	C	A	A	A								24
A	A	A	A	A								25
A	A	B	A	A								26
A	A	A	A	A								27
A	A	A	3.4	u3.0R								28
A	A	B	A	A								29
A	A	F	F	R								30
A	A	A	A	A								31
..	..	2	5	5	..							Count
..	..	..	3.3	2.9	..							Median
..	..	..	3.3	2.9	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : May, 1960

TABLE 48  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1							G	9.4	9.8	11.5	12.0	12.0
2								G	8.2	11.0	12.0	12.0
3							2.3	G	10.6	11.3	12.0	C
4							G	8.5	9.8	10.8	11.8	12.2
5				13.6				9.8	10.8	11.8	11.8	12.6
6							G	8.9	11.2	12.0	13.0	14.0
7								9.8	11.2	12.3	12.9	12.2
8								9.8	11.3	12.1	12.4	12.8
9							6.6	8.8	9.3	C	11.6	11.4
10	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C
13	U5.8s	2.8					G	7.8	10.8	11.5	12.4	B
14							G	11.0	11.6	13.0	12.0	12.0
15	3.6						G	4.0	10.4	11.8	12.0	12.1
16							7.0	8.0	10.7	10.8	12.6	13.0
17			3.5					10.2	10.8	10.8	12.0	12.2
18	4.2						G	9.4	11.8	12.2	12.4	12.6
19								9.4	11.4	11.0	12.0	11.4
20	3.0			4.4			G	7.0	10.0	12.0	12.0	12.0
21	3.2							10.0	11.0	11.4	12.0	12.4
22				C	C	C	C	C	C	C	13.0	14.4
23		6.0	7.0	7.0	C	C	3.0	9.0	12.0	12.0	12.4	13.0
24		C	C	C	C	C	C	C	C	12.0	13.0	13.4
25							G	3.6	6.6	9.2	13.0	12.4
26	3.5							8.2	11.0	10.6	12.0	12.6
27							G	G	G	G	12.0	11.7
28					5.2			8.2	8.6	12.0	11.6	11.6
29	U5.8s	4.0						G	G	6.0	12.6	12.0
30	5.2	8.4	5.6	4.6	5.6	8.4	U7.2s	8.2	11.8	10.2	C	C
31		4.6	U5.6s	U6.6s	2.6			8.2	8.4	9.4	11.8	11.6
Count	8	5	4	5	3	1	14	26	26	26	27	25
Median	3.9	4.6	..	6.6	..	..	G	8.2	10.8	11.4	12.0	12.2
Mean	4.3	5.2	..	7.2	..	..	5.2	8.4	10.4	11.1	12.3	12.4

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

TABLE 48 (Contd.)

Latitude : 10°2'N

Unit : Mc

Ionospheric Data

Longitude : 77°5'E

Month : May, 1960

75°0'E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
12.0	12.2	11.6	10.8	9.7	7.3							1
11.8	11.8	11.6	11.4	11.6	8.6	S		2.0	4.6			2
C	12.2	11.6	10.8	10.6	7.6							3
11.6	10.8	10.4	8.6	7.8	6.7				1.9	4.2	3.1	4
11.8	11.4	10.8	8.2	8.3	7.6			C	C			5
12.9	13.4	12.3	12.0	9.7	8.1	C				S		6
11.9	11.8	11.3	13.1	10.9	G		C	C			3.2	7
12.8	7.7	12.3	G	9.5	8.6							8
13.8	C	C	C	C	C	C	C	C	C	C	C	9
C	C	C	C	C	C	C	C	C	C	C	C	10
C	C	C	C	7.8	C		C		C	C		11
C	12.6	12.0	11.0	8.8	8.4						U4.4s	12
B	11.5	12.0	11.4	9.0	G	4.4			U5.0s	3.0	4.4	13
11.8	12.8	12.4	9.8	12.0	10.0	8.0	5.4	3.8	U5.0s		6.6	14
12.8	12.8	12.2	11.4	11.0	7.6		7.6	4.0	3.1		4.6	15
12.2	12.6	12.4	11.8	9.8	8.8	10.0			2.7	3.6	3.4	16
12.0	10.8	8.0	G	G	G					3.4	2.4	17
C	12.4	12.0	12.4	8.2	7.0					2.3	2.2	18
17.2	13.6	10.4	G	G	G	8.0	3.6				2.0	19
13.0	12.0	12.4	C	7.8	G			1.9	2.7			20
12.8	12.6	11.8	20.0	21.0	11.4	6.0	C		4.4	C	4.0	21
13.0	13.0	13.4	11.6	11.0	9.0	8.0	2.4		5.0	8.0		22
12.6	C	C	12.0	8.6	11.4	10.0	C	2.4	4.8	3.8	3.0	23
12.2	C	C	C	C	7.4	1.8	C	7.0	4.2			24
9.2	13.0	12.0	12.0	10.0	8.0	8.0	3.0			3.0	3.0	25
12.0	12.0	12.0	11.6	9.8	G	U6.0s			4.0		1.8	26
12.2	12.0	12.0	10.4	8.7	G	G		2.5	4.3			27
12.3	11.9	13.4	10.8	8.4	5.8	U6.6s	U4.6s		U6.0s	U4.8s	3.2	28
13.6	13.0	11.0	G	9.4	7.5	U4.6s				U4.5s	U10.6F	29
13.0	12.0	12.0	12.0	10.8	G	8.6		2.4	8.4			30
12.0	12.2	11.6	10.0	10.0	8.9	3.6			U5.8s			31
25	26	26	26	28	27	14	6	8	16	10	16	Count
12.2	12.2	12.0	11.2	9.6	7.6	7.3	4.1	2.4	4.5	3.7	3.2	Median
12.5	12.1	11.7	11.5	10.0	8.3	6.7	4.4	3.3	4.5	4.1	3.9	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : May, 1960

TABLE 48 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							7.4	10.8	11.2	11.6	12.2	12.7
2								11.2	10.2	11.7	12.2	12.2
3							3.4	G	10.6	12.6	12.6	13.0
4							G	8.8	10.4	12.0	12.4	12.2
5							6.6	10.0	11.4	11.7	11.8	12.2
6							u7.0s	11.0	12.0	12.6	13.6	12.9
7							7.7	7.6	12.1	12.4	12.8	12.3
8	3.6						7.9	11.0	10.8	12.7	12.2	12.2
9							8.8	10.7	10.1	11.7	11.3	12.3
10	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	9.8	C	C	C	C
13	5.4		4.8				7.0	10.4	11.0	12.6	B	B
14								9.0	11.4	12.4	12.6	12.2
15							3.5	3.8	10.4	12.3	12.6	11.7
16	3.3			4.4			9.8	10.8	11.8	12.2	12.8	12.4
17							G	10.0	12.4	11.4	11.8	12.4
18							7.6	10.8	12.0	12.0	12.0	12.2
19			3.9				8.6	9.4	11.0	9.8	11.8	17.4
20				3.6			G	9.0	10.6	12.4	12.4	12.4
21							G	11.0	11.0	12.0	12.3	12.8
22			C	C	C	C	C	C	C	C	13.0	13.0
23		5.8	7.0				7.8	10.8	11.4	12.6	12.2	13.0
24		C	C	C	C	C	C	C	12.0	12.6	13.0	13.4
25						2.4	G	G	8.6	10.0	10.6	9.2
26	2.4						G	8.2	10.0	12.0	12.8	12.3
27							G	G	G	9.2	11.5	12.3
28					3.8		G	8.8	11.4	12.2	11.8	11.4
29	2.4	4.3					G	G	G	u9.4s	12.5	12.8
30		S	3.2	5.6	8.6	7.2	10.4	9.8	9.0	10.4	12.6	12.4
31		u7.6s	S	5.8	2.6		G	8.0	9.3	10.6	10.8	11.7
Count	5	3	4	4	3	2	24	27	27	27	27	27
Median	3.3	..	..	..	..	..	5.0	9.8	11.0	12.0	12.3	12.3
Mean	3.4	..	..	..	..	..	7.4	9.6	10.9	11.7	12.2	12.5

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : May, 1960

TABLE 48. (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
12.2	12.6	10.8	9.8	7.6	5.6							1
12.0	11.2	11.2	11.8	9.8	7.8			4.2				2
12.6	11.7	11.5	11.4	8.0	2.8					3.8		3
11.6	10.4	9.0	B	6.7					3.6	4.5	4.4	4
11.3	11.4	8.4	6.6	7.8				C	C			5
12.8	12.4	12.2	11.8	8.2	C	C						6
12.4	12.3	12.3	11.9	8.1	6.6							7
10.6	10.4	11.6	G	8.8	7.2							8
C	C	C	C	C	C	C	C	C	C	C	C	9
C	C	C	C	C	C	C	C	C	C	C	C	10
C	C	C	C	8.6	u4.2s			C	C		C	11
C	12.2	11.4	10.9	7.8	7.6						u7.4s	12
B	12.2	11.0	10.9	7.4				4.5	3.8	4.6	5.0	13
13.0	12.2	10.8	10.4	10.6	7.6	7.0	4.0	3.8	u5.0s	4.0	4.4	14
12.4	12.6	11.6	12.0	8.7		7.6	6.6	4.4	3.6		3.1	15
12.8	12.2	11.4	11.8	10.0	12.4	6.0			3.8	4.0		16
10.0	11.0	G	G	G						2.8		17
12.4	11.8	11.4	9.0	7.2						4.4	3.2	18
19.0	21.0	G	G	G	8.0							19
12.8	12.0	10.0	7.0	G				2.4	3.2			20
12.0	12.0	13.0	21.0	21.0	8.6	6.4		2.6	5.0	6.6	4.6	21
13.0	13.0	12.0	12.0	9.4	10.0	5.0		3.0	7.0			22
C	C	12.0	11.0	8.2	10.0	9.0	4.0	4.0	5.8	4.0		23
C	C	C	C	9.0	6.0	3.0		7.8	4.4			24
13.0	12.6	12.0	11.4	8.3	7.0	4.8			4.6		7.0	25
13.0	12.2	B	12.0	8.3	4.4	S		3.0		2.0		26
12.4	11.8	11.8	9.6	6.2				3.3	3.4			27
11.8	12.0	10.8	8.2	G	5.8	6.4		3.2	u7.4s	3.5	3.2	28
13.0	12.6	10.0	G	7.8		u2.6s			2.0	7.0	u6.5s	29
12.4	12.0	10.8	11.8	8.2	8.2	u5.0s		4.2	u3.8s			30
12.0	11.7	11.4	9.4	10.8	u8.8s	3.0		2.8	4.8			31
24	26	26	26	29	19	12	3	14	16	12	10	Count
12.4	12.1	11.4	10.9	8.2	7.6	5.5	..	3.6	4.1	4.0	4.5	Median
12.5	12.3	11.2	11.0	8.9	7.3	5.5	..	3.8	4.4	4.3	4.9	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : fbEs

Unit : Mc

Month : May, 1960

TABLE 49  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1							G	2.8	3.3	3.7	3.9	4.2
2							G	G	3.5	3.8	3.9	4.3
3								G	3.4	3.8	4.0	C
4							G	2.9	3.4	3.8	4.0	4.2
5								3.0	3.4	3.9	3.9	4.2
6							G	2.9	3.3	3.7	4.1	4.1
7								2.9	3.6	3.8	4.0	4.2
8								2.9	3.3	3.8	4.0	4.2
9							2.2	2.9	3.5	C	4.0	4.3
10	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C
13	1.8						G	3.0	3.5	3.9	4.1	B
14								G	3.5	4.1	4.1	4.2
15	2.0						G	3.7	3.5	C	C	C
16							2.6	2.9	3.5	3.8	4.1	4.3
17			1.8					3.0	3.4	3.7	3.9	4.0
18	1.9						G	3.0	3.4	3.8	3.9	4.0
19								2.9	3.4	3.8	4.0	4.1
20				1.3			G	2.9	3.4	3.8	4.0	4.1
21	2.4							2.8	3.4	3.8	4.0	4.1
22							C	C	C	C	4.0	4.0
23			1.9		C	C	2.2	2.9	3.4	3.7	4.0	4.1
24		C	C	C	C	C	C	C	C	3.7	4.0	4.1
25							G	3.2	3.4	3.7	4.0	4.2
26	2.4							3.0	3.4	3.8	4.0	4.1
27							G	G	G	G	4.1	4.3
28					2.2			3.0	3.4	3.8	4.0	4.1
29	2.0							G	G		4.1	4.2
30	2.4	2.6	2.2	2.0	1.9	2.2	2.4	3.0	3.6	3.9	C	C
31			2.1	2.2	1.6			2.9	3.5	4.0	4.0	4.0
Count	7	1	4	3	3	1	13	26	26	24	26	24
Median	2.0	..	..	..	..	..	G	2.9	3.4	3.8	4.0	4.2
Mean	2.1	..	..	..	..	..	..	3.0	3.4	3.8	4.0	4.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic fbEs

Unit : Mc

Month : May, 1960

TABLE 49 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
4.2	4.1	3.9	3.5	3.1	2.8							1
4.3	4.4	4.0	3.9	3.5	3.0	2.6		1.4	1.7			2
C	4.3	4.0	3.7	3.4	2.6							3
4.2	4.1	3.9	3.6							1.6	1.6	4
4.1	4.0	3.9	3.6	3.2	2.6			C	C			5
4.1	4.0	3.8	3.6	3.3	2.9	C				2.2		6
4.3	4.0	3.8	4.5	3.3			C	C				7
4.3	4.1	3.9	G	3.6	2.9							8
5.0	5.4	C	C	C	C	C	C	C	C	C	C	9
C	C	C	C	C	C	C	C	C	C	C	C	10
C	C	C	C	3.4	C		C		C	C		11
C	4.4	4.5	3.9	3.6	2.8						1.5	12
B		4.6	4.0	3.4	G	2.1			2.1	1.7	1.6	13
4.2	4.2	4.0	3.8	5.2	3.7	3.2	U2.4s		1.5		1.6	14
5.0	4.3	4.0	3.7	3.3	2.7		1.5	1.5	1.6			15
4.0	4.0	3.5	3.2	3.5	2.5					1.7	1.9	16
4.2	4.1	3.8	G	G	G					2.0	1.2	17
C	4.0	3.8	3.5	3.1	2.6					1.5	1.4	18
4.2	4.0	4.4	G	G	G	2.7	2.2				1.4	19
4.1	4.0	3.7	C	3.2					2.0			20
4.1	4.0	3.8	6.2	A	3.5	2.5	C		1.8	C	2.0	21
4.0	4.1	C	3.6	3.3	2.8	2.7	1.5		2.6	2.4		22
4.2	C	C	3.5	3.2	4.0	2.8	C	1.5	2.2	1.5		23
4.1	C	C	C	C	2.6	1.8	C	2.0	1.8			24
4.4	4.8	3.8	3.6	3.2	2.8	2.6	2.4			1.8	1.8	25
4.2	4.1	4.0		3.2	G	2.6					1.6	26
4.3	4.2	4.0	3.8	3.6				2.0	2.8			27
4.2	4.2	4.0	3.8	3.3	3.1	2.8			1.7	2.0		28
4.4	4.3		G			2.1				2.0	2.1	29
4.2	4.2	3.9	3.8	3.4	G	4.1		1.6	2.8			30
4.2	4.3	4.1	3.6	3.6	3.3	2.4			2.6			31
25	26	24	25	26	23	14	5	6	13	11	12	Count
4.2	4.1	3.9	3.6	3.3	2.8	2.6	2.2	1.6	2.0	1.8	1.6	Median
4.3	4.2	4.0	3.8	3.4	3.0	2.6	2.0	1.7	2.1	1.9	1.6	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fB<sub>E</sub>s

TABLE 49 (Contd.)

Latitude : 10°2'N

Unit : Mc

Ionospheric Data

Longitude : 77°5'E

Month : May, 1960

75°0'E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							2.5	3.1	3.4	3.8	4.0	4.0
2									3.6	3.9	4.2	4.3
3							2.8	G	3.6	4.0	4.2	4.0
4							G	3.2	3.6	4.0	4.0	4.2
5								3.1	3.7	4.0	4.0	4.2
6							2.6	3.1	3.6	4.0	4.0	4.1
7							2.7	3.6	3.6	3.9	4.1	4.2
8							2.6	3.1	3.6	3.9	4.0	4.3
9							2.6	3.3	3.6	3.8	4.1	4.3
10	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	3.4	C	C	C	C
13	2.2						2.7	3.3	3.6	3.9	B	B
14								3.2	3.6	4.0	4.2	4.5
15							3.5	3.8				4.7
16	2.0			1.7			2.7	3.3	3.7	3.8	4.2	4.2
17							G	3.2	3.7	4.0	4.0	4.1
18							2.6	3.2	3.6	3.8	3.9	4.1
19			1.5				2.6	3.1	3.4	4.0	4.1	4.1
20				1.6			G	3.1	3.6	3.9	4.1	4.1
21							G	3.2	3.5	3.9	4.0	4.1
22				C	G	C	C	C	C	C	4.0	4.1
23		2.2	2.4				2.6	3.2	3.6	3.8	4.0	4.0
24		C	G	C	C	C	C	C	3.6	3.8	4.0	4.0
25							G	G	3.6	3.8	4.0	4.2
26	2.4						G	3.2	3.6	3.9	4.0	4.2
27							G	G	G	4.1	4.2	4.3
28					1.9		G	3.2	3.8	4.0	4.1	4.4
29	1.8	2.0					G	G	G	4.1	4.2	4.4
30		2.4		2.1	2.0	2.7	3.0	3.2	3.6	3.9	4.1	4.1
31			2.0	2.2			G	3.2	3.6	3.8	4.0	4.2
Count	4	3	3	4	2	1	23	26	26	26	26	27
Median	..	..	..	..	..	..	2.6	3.2	3.6	3.9	4.0	4.2
Mean	..	..	..	..	..	..	2.7	3.2	3.6	3.9	4.1	4.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : f<sub>o</sub>E<sub>s</sub>

Unit : Mc

Month : May, 1960

TABLE 49 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
4.1	3.9	3.8	3.4	3.0								1
4.2	4.3	4.0	4.1	3.6	2.8			3.0				2
4.2	4.2	3.9	3.4	3.0	2.5					1.6		3
4.1	4.0	3.7	B						1.6	1.7	1.7	4
4.2	4.0	3.7	3.4	3.0				C	C			5
												6
4.0	4.0	3.7	3.6	3.2	C	C						7
4.1	3.9	3.8	5.0	3.0	2.4							8
4.2	4.0	3.8	G	3.2	2.5							9
C	C	C	C	C	C	C	C	C	C	C	C	10
C	C	C	C	C	C	C	C	C	C	C	C	11
C	C	C	C	3.1	2.6			C	C		C	12
C		4.1	3.6	3.2	2.4						2.2	13
B		4.4	3.8					1.7	2.1	1.5	1.5	14
4.2	4.0	4.0	3.6	5.0	3.7	2.8	U2.4s	1.8	2.0	1.8	2.1	15
4.4	4.1	3.9	3.5	3.0		1.3	1.4	1.5	1.7		1.7	16
												17
4.2	4.0	3.7	3.4	3.2	5.5	2.1			1.4	1.8		18
4.1	4.0	G	G	G						1.7	1.4	19
4.1	3.8	3.7	3.4	3.0								20
4.2	7.6	G	G	G	2.3							21
4.1	3.9	3.6	3.4					1.8	2.3			22
												23
4.0	3.9	4.0	7.8	7.4	2.6	2.4		1.6	1.9	2.2	2.0	24
4.2	4.0	3.7	3.4	3.0	2.7	1.8		1.8	2.6			25
C	C	3.6	3.4	3.2	3.6	3.2	1.5	2.0	2.0	1.4		26
C	C	C	C	3.2	2.4			2.6	1.7			27
4.2	4.0	3.3	3.4	3.0	3.0	2.0			2.6		2.4	28
												29
4.2	4.2	B	3.6	3.0	2.4	1.8		1.8		1.7		30
4.4	4.1	3.8	3.7	3.4				2.5	2.2			31
4.2	4.1	4.0	3.6	G	2.7	2.3		1.9	1.8			
4.2		G	3.2			1.5				2.2	2.0	
4.2	4.2	3.8	3.6		3.2	2.0		1.6	1.6			
4.3	4.1	3.8	3.5	5.0	3.0			1.6	2.3			
24	23	25	26	25	18	11	3	14	15	10	9	Count
4.2	4.0	3.8	3.4	3.1	2.6	2.0	..	1.8	2.0	1.7	2.0	Median
4.2	4.2	3.8	3.8	3.5	2.9	2.1	..	1.9	2.0	1.8	1.9	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : May, 1960

TABLE 50  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10.2° N

Longitude : 77°5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	1.6	1.7	1.9	2.0	1.8	E	1.9	1.7	1.9	2.6	2.7	2.8
2	1.3	1.9	2.2	1.7	1.8	1.8	2.4	2.1	2.3	2.7	2.8	3.0
3	1.5	1.9	1.8	1.5	1.8	1.8	1.9	2.4	2.4	2.7	2.8	C
4	1.5	1.6	1.6	1.6	1.7	1.8	1.9	1.6	2.2	2.5	2.9	2.8
5	1.4	1.3	1.4	1.5	1.4	1.5	2.2	1.8	2.3	2.8	2.6	3.0
6	1.2	1.2	1.3	1.3	1.2	1.5	1.9	1.9	2.2	2.6	2.7	2.8
7	1.2	1.4	1.4	1.3	1.2	1.6	1.3	1.6	2.4	2.5	2.6	3.1
8	1.4	1.4	1.6	1.4	1.6	1.5	1.3	1.5	2.1	2.5	2.5	2.9
9	1.2	1.4	1.3	1.4	1.3	1.5	1.7	1.8	2.5	2.6	2.6	3.0
10	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	1.3	1.3	C	C	C	C	C	C
13	1.3	1.7	1.4	1.8	1.6	1.5	1.7	1.9	2.4	2.6	2.8	B
14	1.4	1.5	2.0	1.5	1.5	1.3	2.4	2.2	2.4	3.2	3.1	2.7
15	1.4	1.5	1.6	1.3	1.6	1.7	2.2	2.5	2.4	4.2	4.6	5.0
16	2.1	2.3	1.8	1.8	1.7	1.5	1.7	1.7	2.0	2.4	2.5	3.0
17	1.6	1.5	1.6	1.4	1.8	1.4	2.1	1.8	2.1	2.3	2.5	2.6
18	1.4	1.7	1.6	1.4	1.4	1.3	1.4	1.5	2.1	2.4	2.4	2.4
19	1.3	1.2	1.3	1.4	1.6	1.7	2.2	1.7	2.0	2.3	2.5	2.7
20	1.3	1.4	1.5	E	1.6	1.5	1.8	1.6	1.9	2.4	2.6	2.7
21	1.7	2.0	1.8	1.7	1.4	1.5	2.2	1.6	2.2	2.5	2.6	3.0
22	2.3	2.2	1.5	C	C	C	C	C	C	C	2.6	2.8
23	1.8	1.9	1.8	2.0	2.0	1.6	1.4	1.5	2.2	2.3	2.6	2.7
24	1.4	C	C	C	C	C	C	C	C	2.4	2.4	2.6
25	1.5	1.8	2.0	1.4	1.5	1.3	1.6	1.8	2.5	2.6	3.8	3.0
26	1.5	2.4	2.0	2.0	1.7	1.5	2.2	1.6	2.2	2.6	2.8	3.0
27	2.2	1.7	1.9	1.5	1.3	1.6	1.7	1.9	2.1	3.0	3.0	3.0
28	1.9	2.0	1.8	1.5	1.4	2.0	2.4	1.9	2.2	2.6	2.8	3.0
29	1.4	1.6	1.7	2.2	1.9	2.1	2.8	2.3	3.0	3.0	3.1	3.2
30	2.0	1.6	1.6	1.4	1.4	1.6	1.8	1.8	2.3	2.6	C	C
31	1.5	2.0	1.5	1.5	1.5	1.7	2.3	1.6	2.1	2.4	2.7	2.9
Count	28	27	27	26	27	27	26	26	26	27	27	25
Median	1.4	1.7	1.6	1.5	1.6	1.5	1.9	1.8	2.2	2.6	2.7	2.9
Mean	1.5	1.7	1.7	1.6	1.6	1.6	1.9	1.8	2.2	2.6	2.8	2.9

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : May, 1960.

TABLE 50 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2' N

Longitude 77°5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
2.8	2.9	2.7	2.4	2.2	1.9	1.8	1.4	1.4	1.5	1.1	1.3	1
3.1	3.0	2.8	2.7	2.3	1.8	1.3	S	1.1	1.4	1.8	1.8	2
C	2.8	2.7	2.6	2.2	2.0	1.9	1.8	1.4	1.6	1.7	1.5	3
3.0	2.8	2.9	2.6	4.0	2.8	1.8	1.9	1.4	1.6	1.4	1.5	4
3.0	3.0	2.6	2.5	2.1	2.0	1.6	S	C	C	u1.2s	1.4	5
2.8	2.5	2.5	2.3	2.0	2.8	C	1.7	1.3	1.8	1.3	1.6	6
3.1	2.9	2.6	2.2	2.0	2.2	1.7	C	C	1.4	1.4	1.4	7
2.8	3.2	2.6	2.6	2.1	2.2	1.8	1.4	S	S	1.4	1.5	8
3.1	C	C	C	C	C	C	C	C	C	C	C	9
C	C	C	C	C	C	C	C	C	C	C	C	10
C	C	C	C	2.2	C	1.3	C	S	C	C	1.6	11
C	3.0	4.5	2.7	2.4	2.2	1.8	1.4	1.5	1.2	1.2	1.5	12
6.4	5.1	4.6	3.2	2.7	2.0	1.3	1.4	1.6	1.2	1.4	1.1	13
2.8	3.0	2.8	2.8	2.1	2.3	1.5	1.5	1.5	1.3	2.0	1.5	14
5.0	3.4	3.0	2.6	2.2	1.8	1.8	1.5	1.5	1.3	1.5	1.6	15
2.9	2.7	2.5	2.4	2.0	2.2	1.5	1.6	1.5	1.5	1.1	1.3	16
2.8	2.7	2.6	2.4	2.4	2.1	1.8	1.4	1.4	1.5	1.1	1.0	17
C	2.8	2.6	2.4	2.0	1.8	1.8	1.4	1.4	1.3	1.3	1.1	18
3.0	2.7	2.4	2.6	2.3	2.2	1.6	1.3	1.6	1.5	1.5	1.1	19
2.8	2.7	2.4	C	2.0	2.0	1.9	1.5	1.4	1.2	1.9	1.9	20
2.8	2.6	2.6	2.2	1.8	1.8	1.2	C	1.3	1.1	C	1.1	21
2.4	2.6	2.4	2.2	2.0	1.8	1.5	1.2	1.5	1.1	1.2	1.5	22
2.8	C	C	2.3	1.9	1.4	1.3	C	1.2	1.3	1.1	1.6	23
2.8	C	C	C	C	1.6	1.5	C	1.0	1.1	1.7	1.7	24
4.0	3.0	2.6	2.6	2.4	1.6	1.5	1.4	1.5	1.7	1.6	1.5	25
3.0	2.8	3.2	4.2	2.5	2.1	1.5	1.7	1.4	1.5	1.8	E	26
2.8	2.8	2.7	2.6	2.2	2.8	2.2	2.4	1.9	1.4	2.3	1.9	27
3.0	2.8	2.8	2.8	2.4	2.6	1.7	1.8	u1.7s	1.3	1.4	1.5	28
3.0	3.2	4.4	2.8	2.5	1.9	1.6	1.4	u1.7s	1.9	1.3	1.7	29
3.0	3.0	2.6	2.8	2.5	2.2	1.7	1.5	S	1.4	1.7	1.5	30
3.4	3.4	2.6	2.6	2.1	2.1	1.5	1.7	1.7	1.2	1.5	1.8	31
26	26	26	26	28	28	28	22	24	26	27	29	Count
3.0	2.8	2.6	2.6	2.2	2.0	1.6	1.5	1.4	1.4	1.4	1.5	Median
3.2	3.0	2.9	2.6	2.3	2.1	1.6	1.6	1.4	1.4	1.5	1.5	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : May, 1960

TABLE 50 (Contd.)

Ionospheric Data

75.0°E. Mean Time

Latitude : 10.2° N

Longitude : 77.5° E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	1.5	1.7	1.9	1.9	E	1.9	1.8	1.7	2.5	2.6	2.8	2.8
2	1.2	1.4	1.8	1.5	1.5	1.9	2.9	2.6	2.7	2.7	2.8	3.0
3	1.9	1.7	1.5	1.5	1.6	2.1	2.4	2.6	2.6	2.6	2.8	2.8
4	1.8	1.4	1.5	1.8	1.6	1.8	2.3	2.0	2.3	2.6	2.6	2.7
5	1.3	1.4	1.1	1.4	1.5	1.8	1.8	2.1	2.9	2.7	2.8	3.0
6	1.3	1.4	1.2	1.4	1.8	1.9	2.1	2.1	2.4	2.5	2.6	2.8
7	1.5	1.4	1.9	1.3	1.5	1.5	1.9	1.9	2.5	2.7	2.7	3.3
8	1.3	1.5	1.2	1.4	1.4	1.8	1.8	1.8	2.4	2.3	2.6	3.0
9	1.1	1.6	1.3	1.2	1.5	1.8	1.6	2.5	2.5	2.6	2.9	3.1
10	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	1.5	C	C	2.3	C	C	C	C
13	1.1	1.5	1.3	1.6	1.6	1.9	1.8	2.1	2.5	2.5	B	7.0
14	1.5	1.4	1.4	1.3	1.3	1.8	2.6	2.2	2.4	2.9	3.0	3.0
15	1.6	1.5	1.5	1.6	1.6	1.9	2.6	2.6	4.2	4.6	4.8	4.7
16	1.6	1.8	1.4	1.6	1.4	2.0	1.9	2.1	2.1	2.4	3.8	3.0
17	1.5	1.6	1.3	1.5	1.5	1.9	2.0	2.0	2.2	3.3	2.7	2.7
18	2.1	1.5	1.7	1.6	1.4	1.7	1.7	2.0	2.2	2.1	2.5	3.0
19	1.2	1.3	1.3	1.7	1.8	1.6	1.8	1.8	2.2	2.2	2.6	2.7
20	1.4	1.4	1.2	1.1	1.5	1.6	1.8	1.7	2.1	2.2	2.7	2.9
21	1.6	1.9	1.4	1.5	1.4	1.7	1.8	1.9	2.3	2.5	2.7	3.0
22	2.2	1.6	C	C	C	C	C	C	C	C	2.5	2.7
23	1.9	2.0	2.0	2.3	1.7	1.7	1.5	1.8	2.2	2.4	2.8	2.8
24	1.4	C	C	C	C	C	C	C	2.2	2.3	2.6	2.6
25	2.2	1.8	1.9	1.4	1.5	1.6	2.6	2.3	2.6	2.6	3.0	3.0
26	1.4	2.6	2.0	2.4	1.6	1.9	1.9	1.9	2.4	2.7	3.0	2.8
27	1.7	1.4	1.3	1.6	1.6	1.6	1.8	2.1	2.2	2.8	2.8	2.8
28	1.9	1.8	1.8	2.1	1.8	2.2	1.8	2.2	2.4	2.8	3.1	3.0
29	1.3	1.5	1.7	2.0	2.2	2.5	2.2	2.7	3.0	2.8	3.0	3.0
30	2.2	1.8	1.7	1.4	1.2	1.8	1.7	1.9	2.4	2.6	2.8	2.8
31	1.8	1.6	1.6	1.4	1.8	1.8	1.9	1.9	2.4	2.4	2.7	3.4
Count	28	27	26	26	27	26	26	27	27	27	27	28
Median	1.5	1.5	1.5	1.5	1.5	1.8	1.8	2.1	2.4	2.6	2.8	3.0
Mean	1.6	1.6	1.5	1.6	1.6	1.8	2.0	2.1	2.5	2.6	2.9	3.1

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : May, 1960.

TABLE 50 (Contd.)

Ionospheric Data

75.0 E Mean Time

Latitude : 10.2° N.

Longitude : 77.5° E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.9	2.7	2.6	2.4	2.3	2.3	1.3	1.4	1.4	1.2	1.5	1.3	1
3.5	3.0	2.7	2.5	2.2	1.7	1.8	1.4	1.4	1.8	2.2	1.4	2
2.9	2.9	2.6	2.5	2.1	1.9	1.4	1.6	1.7	1.5	1.5	1.5	3
3.0	3.0	2.8	5.4	3.2	2.4	1.5	1.4	1.6	1.2	1.4	1.7	4
2.8	2.8	2.6	2.4	2.2	2.2	1.4	1.5	C	C	1.2	1.2	5
2.6	2.5	2.4	2.2	2.6	C	C	1.4	1.4	1.9	2.1	1.4	6
2.8	2.7	2.3	2.3	2.2	1.9	1.4	C	C	1.4	1.6	1.4	7
3.0	2.8	2.6	3.0	2.4	2.0	1.5	S	1.3	1.6	1.4	1.3	8
C	C	C	C	C	C	C	C	C	C	C	C	9
C	C	C	C	C	C	C	C	C	C	C	C	10
C	C	C	C	2.2	1.8	1.1	S	C	C	1.4	C	11
C	4.9	3.2	2.4	2.6	1.8	1.4	1.4	1.3	1.2	1.3	1.7	12
5.7	4.8	4.4	3.0	2.4	2.5	1.4	1.4	1.2	1.3	1.2	1.3	13
2.9	2.8	2.7	2.2	2.5	2.3	1.4	1.7	1.2	1.3	1.8	1.6	14
3.8	3.0	3.0	2.5	2.3	2.4	1.2	1.4	1.2	1.7	1.8	1.7	15
2.8	2.6	2.7	2.4	2.0	2.3	1.5	1.4	1.1	1.2	1.3	1.7	16
2.9	2.8	2.6	2.3	2.2	2.2	1.3	1.4	1.4	1.1	1.1	1.4	17
2.7	2.6	2.6	2.2	2.0	2.4	1.3	1.4	1.3	1.3	1.1	1.2	18
2.8	2.5	2.6	2.6	2.0	1.7	1.3	1.5	1.5	1.6	1.3	1.4	19
2.7	2.6	2.6	2.1	2.1	2.3	2.6	1.3	1.3	1.2	1.7	2.0	20
2.8	2.6	2.3	2.3	1.7	1.5	1.1	1.3	1.1	1.1	1.2	1.9	21
2.6	2.6	2.5	2.2	2.1	1.5	1.1	1.3	1.0	1.4	1.4	1.7	22
C	C	2.4	2.0	1.5	1.4	1.2	E	1.3	1.2	1.1	1.2	23
C	C	C	C	1.7	1.4	1.4	1.5	1.3	1.2	1.4	1.5	24
3.0	2.7	2.7	2.6	2.0	1.7	1.4	U2.2s	1.8	E	1.5	1.7	25
2.8	3.0	5.7	2.8	2.2	1.7	1.3	1.5	1.2	1.7	1.1	1.9	26
2.9	2.6	2.6	2.3	2.2	2.4	2.4	2.0	1.3	1.7	2.0	U2.4s	27
2.8	3.2	2.8	2.4	2.6	1.9	1.4	1.7	1.5	1.6	1.6	1.7	28
3.0	4.5	4.0	2.8	2.2	3.2	1.4	S	U1.5s	1.3	1.6	1.8	29
3.1	3.0	3.0	2.5	2.2	2.8	1.0	1.5	1.5	1.3	1.5	1.5	30
3.0	2.7	2.4	2.2	2.5	1.7	1.5	1.5	1.3	1.2	1.8	1.6	31
25	26	27	27	29	28	28	25	26	27	29	28	Count
2.9	2.8	2.6	2.4	2.2	2.0	1.4	1.4	1.3	1.3	1.4	1.6	Median
3.0	3.0	2.9	2.5	2.2	2.0	1.4	1.5	1.4	1.4	1.5	1.6	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : h'F2

Unit : Km

Month : May, 1960.

TABLE 51  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	L	L
6								L	L	L	L	L
7								L	285	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								C	C	C	C	C
11								C	C	C	C	C
12								C	C	C	C	C
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	280	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								C	C	C	C	C
23								C	C	C	C	C
24								C	C	C	C	C
25								C	C	C	C	C
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	270L	L	L	L
31								L	L	L	L	L
Count								..	2	1	..	..
Median								..	..	..	..	..
Mean								..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km

Month : May, 1960.

TABLE 51 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	L	L							1
L	L	L	L	L	L							2
C	L	L	L	L	L							3
L	L	L	L	L	L							4
L	L	L	L	L	L							5
L	L	L	L	L	L							6
L	L	L	L	L	L							7
L	L	L	L	L	L							8
C	C	C	C	C	C							9
C	C	C	C	C	C							10
C	C	C	C	C	C							11
B	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
C	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
L <sup>H</sup>	L	L	L	L	L							29
L	L	L	L	L	L							30
L	L	L	L	L	L							31
..	..	..	1	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km

Month : May, 1960.

TABLE 51 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2° N.

Longitude : 77.5° E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							L	L	L	L	L	L
2							L	L	L	L	L	L
3							L	L	L	L	L	L
4							L	L	L	L	L	L
5							L	L	L	L	L	L
6							L	L	L	L	L	L
7							L	L	L	L	L	L
8							L	L	L	L	L	L
9							L	L	L	L	L	L
10							C	C	C	C	C	C
11							C	C	C	C	C	C
12							C	C	C	C	C	C
13							L	L	L	L	L	L
14							L	L	L	L	L	L
15							L	L	L	L	L	L
16							L	L	L	L	L	L
17							L	L	L	L	L	L
18							L	L	L	L	L	L
19							L	L	L	L	L	L
20							L	L	L	L	L	L
21							L	L	L	L	L	L
22							C	C	C	C	C	C
23							C	C	C	C	C	C
24							C	C	C	C	C	C
25							L	L	L	L	L	L
26							L	L	L	L	L	L
27							L	L	L	L	L	L
28							L	L	L	L	L	L
29							L	L	L	L	L	L
30							L	L	L	L	L	L
31							L	L	L	L	L	L
Count							..	..	1	1	..	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km

Month : May, 1960.

TABLE 51 (Contd.)

Ionospheric Data

75.0 E. Mean Time

Latitude : 10.2° N.

Longitude : 77.5° E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L								5
L	L	L	L	L								6
L	L	L	L	L								7
L	L	L <sup>H</sup>	L	L								8
C	C	C	C	C								9
C	C	C	C	C								10
C	C	C	C	L								11
C	C	C	C	L								12
L	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	L	L	L								16
L	L <sup>300</sup>	L	L	L								17
L	L	L	L	L								18
L	L	L <sup>360</sup>	L	L								19
L	L	L	L	L								20
L	L	L	L	A								21
C	C	C	C	L								22
C	C	C	C	L								23
C	C	C	C	L								24
L	L	L	L	L								25
L	L	L	L	L								26
L	L	L	L	L								27
L	L <sup>H</sup>	L	L	L								28
L	L	L	L	L								29
L	L	L	L	L								30
L	L	L	L	L								31
..	1	1	..	..								Count
..	..	..	..	..								Median
..	..	..	..	..								Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km

Month : May, 1960.

TABLE 52  
Ionospheric Data

75°0'E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	340	350	F	U400F	430	E	280	240	230	220	220	220
2	220	250	260	240	220	205	240	220	215	210	200	200
3	225	240	280	275	220	200	245	220	210	205	200	C
4	245	250	240	220	215	220	250	230	220	200H	205	200
5	265	240	225	220	240	220	245	225	205	200H	185H	190H
6	265	260	230	230	225	230	265	240	230	220	215	205
7	230	270	330	260	265	300	275H	250	230	220H	215	205
8	280	260	240	230	220	225	260	240	225	220	205	210
9	250	260	250	240	235	255	270	240	235	C	215	220
10	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	220	240	C	C	C	C	C	C
13	260	260	275	235	220	220	260	240	210	215	205H	B
14	U360F	U345F	U300F	220	205	215	255	235	215	215H	205H	210H
15	270	265	270	245	225	215	260	U240A	225	U235B	U230B	B
16	265	280	295	275	235	220	260	215H	225H	215H	210	215
17	400	400	340	345	355	300	260	240	220	200	205	200
18	275	255	245	225	220	220	250	240	220	220	200	200
19	360	340	305	250	215	215	250	230	200	195H	210	200
20	360	380	400	420	360	240	245	230	220	200H	200	185H
21	300	295	270	240	220	215	250	230	220	200	200	200
22	320	320	340	C	C	C	C	C	C	C	200	200
23	340	320	310	280	230	220	260	235	220	200	200	200
24	340	C	C	C	C	C	C	C	C	215	215	205
25	260	280	300	280	200	240	255	240	230	220	220	210
26	380	400	400	350	260	220	260	240	220	220	200	205
27	300	320	305	260	225	220	255	235H	220	195H	210	200H
28	375	430	U420F	330	295	U275F	265	240	235	220H	215	205
29	320	300	240	230	240	260	260	240	230	220	220H	220H
30	F	F	375	U400F	F	F	280	260	250	235	C	C
31	260	300	320	360	355	355	280	250	240H	240	220H	215
Count	27	26	26	26	26	26	2	26	26	26	27	24
Median	280	290	300	255	225	220	260	240	220	215	205	205
Mean	300	305	300	280	250	240	260	235	225	215	210	205

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km

Month : May, 1960.

TABLE 52 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2° N.

Longitude : 77.5° E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
205	195	200	200	225	250	280	360	380	340	275	225	1
195	200	195	220	230	235	280	360	360	335	300	250	2
C	195 <sup>H</sup>	200	200	230	245	280	390	F	F	F	260	3
200	210	210	205	2250 <sup>B</sup>	250	280	370	F	360	325	300	4
205	200	200	215	220	240	270	330	C	C	2340 <sup>s</sup>	305	5
200	200	200	215	235	255	C	355	F	F	365	260	6
210	210	215	A	235	245	280	C	C	345	320	305	7
215	205	210	225	245	260	310	F	F	F	2340 <sup>F</sup>	260	8
A	A	C	C	C	C	C	C	C	C	C	C	9
C	C	C	C	C	C	C	C	C	C	C	C	10
C	C	C	C	240	C	300	C	F	C	C	245	11
C	200	B	235	230	260	280	2370 <sup>H</sup>	F	295	260	260	12
B	B	B	220	240	255	280	2375 <sup>F</sup>	2400 <sup>F</sup>	2380 <sup>F</sup>	2335 <sup>F</sup>	2375 <sup>F</sup>	13
195	200 <sup>H</sup>	200	235	A	265	285	2350 <sup>F</sup>	365	310	280	260	14
B	210	215	220	240	255	280	2315 <sup>H</sup>	2320 <sup>F</sup>	345	305	280	15
215 <sup>H</sup>	200 <sup>H</sup>	210 <sup>H</sup>	205 <sup>H</sup>	230	260	280	335	380	335	2325 <sup>F</sup>	2380 <sup>F</sup>	16
200	200	200 <sup>H</sup>	220	235	245	280	370	F	F	350	300	17
C	200	225	235	220	240	265	325	F	F	F	380	18
200	200	A	210	220	240	280	340	F	F	340	320	19
190 <sup>H</sup>	210	205	C	220	240	275	305	280	300	295	295	20
200	200	200	A	A	A	270	C	340	F	360	340	21
200	200	C	180 <sup>H</sup>	230	260	280	320	320	F	F	2340 <sup>F</sup>	22
200	C	C	190 <sup>H</sup>	220	A	300	C	340	345	320 <sup>F</sup>	340	23
210	C	C	C	C	260	280	C	330	300	260	240	24
2215 <sup>A</sup>	A	210	210	240	260	280	340	F	F	2380 <sup>F</sup>	320	25
200	200	220	B	220	250	270	330	350	380	360	320	26
200 <sup>H</sup>	215 <sup>H</sup>	205 <sup>H</sup>	230	2240 <sup>L</sup>	255	285	340	315	420	400	360	27
210	200 <sup>H</sup>	220	215 <sup>H</sup>	230	260	280	335	2370 <sup>F</sup>	2360 <sup>F</sup>	F	320	28
220 <sup>H</sup>	200 <sup>H</sup>	240	240	260	280	300	360	F	2380 <sup>F</sup>	F	2420 <sup>F</sup>	29
220	225	225	230	250 <sup>H</sup>	260	A	335	2325 <sup>F</sup>	F	F	260	30
220	215	220	220	250	2265 <sup>A</sup>	280	325	F	F	320	280	31
23	24	22	23	26	26	27	23	15	16	22	29	Count
200	200	210	220	230	255	280	340	340	345	325	300	Médian
205	205	210	215	235	255	280	345	345	345	325	305	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F :  
Unit : Km  
Month : May, 1960.

TABLE 52 (Contd.)  
Ionospheric Data  
75.0 E Mean Time

Latitude : 10°2' N.  
Longitude : 77°5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	310	385	L380F	U430F	E	335	255	240	220	210	210	210
2	230	245	255	235	205	210	235	220	210	200	200	200
3	225	260	290	250	215	225	230	220	210	190	200	205
4	250	240	225	220	215	245	240	230	210	210	205	195
5	225	235	225	240	220	225	235	215	205	195H	190H	200
6	260	240	240	225	220	255	250	235	220	220	205	205
7	245	320	300	260	280	290H	260H	245	225	220H	210	205
8	265	245	245	225	220	265	250	230	225	205	200	205
9	255	260	250	230	240	305	260	240	230	220	210	220
10	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	225	C	C	235	C	C	C	C
13	265	275	260	215	220	260	255	230	200H	210	B	B
14	U360F	U335F	240	215	210	255	250	225	210	200H	200H	200H
15	265	275	265	235	210	255	240	235	B	U240B	B	B
16	270	280	280	245	220	240	255	225H	225	200H	225	215
17	400	400	320	365	315	300	240	220	220	220	200	200H
18	260	250	240	220	220	270	245	230	220	205	200	200
19	360	330	280	220	220	255	250	210	200H	220	205	200
20	370	400	F	400	330	230	235	220	205	200	195	185H
21	295	295	260	220	215	245	240	220	215	200	200	200H
22	320	330	C	C	C	C	C	C	C	C	220	200
23	340	320	300	260	220	260	240	220	210	205	200	200
24	335	C	C	C	C	C	C	C	220	215	210	200
25	280	300	300	240	220	280	245	240	220	220	215	U210A
26	400	400	400	300	230	260	250	240	220	220	200	200
27	300	330	270	240	220	250	240	225H	205H	200H	205H	215H
28	400	405	U380F	300	265	280	260	240	230	220H	210	205
29	U305F	210	225	240	250	265	255	U240L	225	215	220H	220H
30	U410F	U380F	U400F	F	F	340	270	255	240	235	225	220
31	260	315	350	360	350	305	260	240	240	225H	220	220
Count	28	27	25	25	26	26	26	27	26	27	26	26
Median	290	300	270	240	220	260	250	230	220	210	205	200
Mean	300	310	285	265	235	265	250	230	220	210	205	205

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km

Month : May, 1960.

TABLE 52 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
200	200	205	210	240	260	305	380	405	305	250	220	1
205	200	205	245	245	260	310	370	360	320	270	240	2
190H	200	200	210	230	260	320	425	F	F	280	245	3
190H	215	210	B	240	260	310	320	U360F	360	310	290	
200	200	205	210	225	250	300	340	C	C	325	280	5
205	200	205	220	245	C	C	380	F	F	300F	240	6
205	205	215	A	240	265	320	C	C	320	320	280	7
210	200	215	240	245	285	385	F	F	F	U275F	250	8
C	C	C	C	C	C	C	C	C	C	C	C	9
C	C	C	C	C	C	C	C	C	C	C	C	10
C	C	C	C	260	285	340	F	C	C	275	C	11
C	B	235	230	250	270	315	F	U310F	280	260	270	12
B	B	B	235	240	270	305	F	U390F	U355F	U350F	U370F	13
210H	200H	200H	230	A	275	U315F	U370F	330	290	270	265	14
215	210	205	225	240	270	300	U330F	U325F	340	300	265	15
205H	200H	200	200	235	A	U300F	365	370F	U335F	U340F	400	16
200	200	200	220	240	260	310	F	F	F	325	280	17
200	200	215	225	240	260	280	F	F	400	400	360	18
200	A	205	220	235	260	300	F	F	360	F	F	19
200	200	200	220	235	260	280	F	300	295	295	300	20
200H	200	A	A	A	260	295	360	F	F	360	320	21
205	200	180H	180H	240	260	290	280	320	F	340	330	22
C	C	190H	200H	240	U280A	300	325	380	F	340F	320	23
C	C	C	C	255	280	300	340	340	280	250	250	24
210	220	200	210H	240	280	300	F	F	F	340	360	25
200	200	B	220	240	260	300	340	400	380	340	300	26
200	200H	215	220	U240L	260	315	370	420	400	U380F	360	27
200H	210	220	220H	U240L	260	300	U360F	F	F	U350F	325	28
210	B	235	U260L	260	295	320	F	U360F	F	U440F	U390F	29
210	230	220	220H	U255L	280	305	360	F	265	275	255	30
215	210	220H	240	A	U270A	300	360	F	U320F	300	260	31
24	22	24	24	26	27	28	18	15	17	28	27	Count
200	200	205	220	240	260	300	360	360	320	315	280	Median
205	205	210	220	240	270	310	355	360	330	315	295	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : h'E

Unit : Km

Month : May, 1960

TABLE 53  
Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1							135	A	A	A	A	A
2								120	A	A	A	A
3								115	105	A	A	C
4							135	110	A	A	A	A
5								A	A	A	A	A
6							130	120	A	A	A	A
7								A	A	A	A	A
8								105	A	A	A	A
9							130	A	A	A	A	A
10							C	C	C	C	C	C
11							C	C	C	C	C	C
12							C	C	C	C	C	C
13							120	A	A	A	A	B
14								120	A	A	A	B
15							125	115	A	B	B	B
16								A	A	A	A	A
17								A	A	A	A	A
18							105	A	A	A	A	A
19								A	A	A	A	A
20							115	100	A	A	A	A
21								A	A	A	A	A
22							C	C	C	C	A	A
23							110	A	A	A	A	A
24							C	C	C	A	A	A
25							120	110	120	120	B	A
26								A	A	A	A	A
27							130	110	105	115	A	A
28								120	120	120	120	120 <sup>F</sup>
29								130	B	120	A	120
30								A	A	125	C	C
31								120	115	115	115	115
Count							11	13	5	6	2	3
Median							125	115	115	120	..	..
Mean							125	115	115	120	..	..

Sweep 1.0 Mc, to 25.0 Mc, in 27 seconds,

Characteristic : h'E

Unit : Km

Month : May, 1960

TABLE 53 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A	A							1
A	A	A	A	A	A	A						2
C	A	A	A	A	A							3
A	A	A	110	110	B							4
A	A	A	A	105	A							5
A	A	A	A	A	A							6
A	A	A	A	A	A	130H	C					7
A	A	A	110	A	A							8
C	C	C	C	C	C	C	C					9
C	C	C	C	C	C	C	C					10
C	C	C	C	110	C							11
C	A	B	A	A	A	120						12
B	B	B	A	110	115							13
A	A	A	A	A	A							14
B	A	A	A	A	120							15
A	A	A	A	A	A							16
A	A	105	100	105	115							17
C	A	A	105	105	115							18
A	A	A	105	110	120							19
A	A	A	C	115	125							20
A	A	A	A	A	A							21
A	A	A	A	A	110							22
A	C	C	A	110	A							23
A	C	C	C	C	110							24
B	A	A	A	A	A							25
A	A	A	B	A	120							26
A	A	A	A	115								27
A	115	120	120	120								28
A	A	B	B	A	120							29
A	A	120	120	120	120							30
B	B	115	A	A	A							31
..	1	5	7	11	13	..						Count
..	..	115	110	110	120	..						Median
..	..	115	110	110	120	..						Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km

Month : May, 1960

TABLE 53 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							110	A	A	A	A	A
2								120	A	A	A	A
3								115	A	A	A	A
4							135	A	A	A	A	A
5							115	A	A	A	A	A
6							120	A	A	A	A	A
7							120	120	A	A	A	A
8							115	A	A	A	A	A
9							A	A	A	A	A	A
10							C	C	C	C	C	C
11							C	C	C	C	C	C
12							C	A	C	C	C	C
13							105	A	A	A	B	B
14								A	A	A	A	A
15							R	115	B	B	B	B
16							A	A	A	A	B	A
17							110	A	A	A	A	A
18							105	A	A	A	A	A
19							A	A	A	A	A	A
20							105	A	A	A	A	A
21							105	A	A	A	A	A
22							C	C	C	C	A	A
23							A	A	A	A	A	A
24							C	C	A	A	A	A
25							B	110	A	A	A	A
26							120	A	A	A	A	A
27							115	110	110	A	A	A
28							120	120	120	120	A	120
29							130	125	130	120	120	A
30							A	A	A	120	120	A
31							120	115	120	115	A	B
Count							16	9	4	4	2	1
Median							115	115	..	..	..	..
Mean							115	115	..	..	..	..

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km

Month : May, 1960

TABLE 53 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	A	A	A								1
A	A	A	A	A	A							2
A	A	A	A	A								3
A	110	110	B									4
A	A	A	105	110								5
A	A	A	A	A	C							6
A	A	A	A	A								7
A	A	A	115	A								8
C	C	C	C	C	C							9
C	C	C	C	C	C							10
C	C	C	C	120								11
C	B	A	105	120								12
B	B	B	115	110								13
A	A	A	A	A								14
A	A	A	A	A								15
A	A	A	A	A								16
A	A	105	105	105								17
A	A	A	105	115								18
A	A	105	105	110	A							19
A	A	A	110	120								20
A	A	A	A	A								21
A	A	A	A	110								22
C	C	A	A	A								23
C	C	C	C	A								24
A	A	A	A	A								25
A	A	B	110	110								26
A	A	A	A	115								27
120	120	120	120	130								28
A	B	B	125	A								29
120	A	125	120	120								30
120	115	115	115	A								31
3	3	6	13	13	..							Count
..	..	110	110	115	..							Median
..	..	115	110	115	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : May, 1960

TABLE 54  
Ionospheric Data  
75°0'E Mean Time

Latitude: 10°2'N

Longitude: 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1							G	100	100	100	100	100
2							G	100	100	100	100	100
3							125	G	100	100	100	C
4							G	100	100	100	100	100
5				105				100	100	100	100	100
6							G	105	100	100	100	100
7								100	100	100	100	100
8								100	100	100	100	100
9							100	100	100	100	100	100
10	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C			C	C	C	C	C	C
13	110	115					G	100	100	100	100	B
14								G	100	100	100	100
15	100						G	125	100	100	100	100
16							115	100	100	100	100	100
17			100					100	100	100	100	100
18	105						G	100	100	100	100	100
19								100	100	100	100	100
20	120			115			G	100	100	100	100	100
21	115							100	100	100	100	100
22				C	C	C	C	C	C	C	100	100
23		120	120	170			120	100	100	100	100	100
24		C	C	C	C	C	C	C	C	100	100	100
25							G	160	110	100	100	100
26	100							100	100	100	100	100
27							G	G	G	G	100	100
28					120			115	105	100	100	100
29	120	120						G	G	140	100	100
30	120	125	125	120	120	120	120	100	120	115	C	C
31		130	125	120	120			115	105	100	100	100
Count	8	5	4	5	3	1	5	21	24	26	27	25
Median	110	120	..	120	..	..	120	100	100	100	100	100
Mean	110	120	..	125	..	..	115	105	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : May, 1960

TABLE 54 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude: 10.2°N

Longitude: 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
100	100	100	100	100	105							1
100	100	100	100	100	100	100		130	120			2
C	100	100	100	100	100							3
100	100	100	100	100	100				125	120	120	4
100	100	100	100	100	100			C	C			5
100	100	100	100	100	100	C				100		6
100	100	100	100	100	G						120	7
100	100	100	G	100	100							8
100	100	C	C	C	C	C	C	C	C	C	C	9
C	C	C	C	C	C	C	C	C	C	C	C	10
C	C	C	C	100	C		C		C	C		11
C	100	100	100	100	110						105	12
B	100	100	100	100	G	100			115	115	120	13
100	100	100	100	100	100	100	100	100	110		115	14
100	100	100	100	100	115		115	120	135		125	15
100	100	100	100	100	100	100			150	125	130	16
100	100	100	G	G	G					120	120	17
C	100	100	100	100	100					120	120	18
100	100	100	G	G	G	120	200				120	19
100	100	100	C	100	G			100	100			20
100	100	100	100	100	100	100	C		100	C	100	21
100	100	100	100	100	100	100	100		100	100		22
100	C	C	100	100	100	100	C	100	100	120	120	23
100	C	C	C	C	100	145	C	100	100			24
100	100	100	100	100	100	100	100			100	120	25
100	100	100	100	100	G	100			100		95	26
100	100	100	100	105	105			105	100			27
100	100	100	105	115	120	110	120		120	120	130	28
100	100	105	G	120	120	120				140	120	29
100	100	105	110	120	G	120		115	120			30
100	100	100	100	100	100	120			120			31
25	27	26	22	26	20	15	6	8	16	11	16	Count
100	100	100	100	100	100	100	110	100	120	120	120	Median
100	100	100	100	100	105	110	120	110	115	115	120	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : May, 1960

TABLE 54 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude: 10°2'N

Longitude: 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							100	100	100	100	100	100
2								105	100	100	100	100
3							120	G	100	100	100	100
4							G	100	100	100	100	100
5							100	100	100	100	100	100
6							115	100	100	100	100	100
7							110	115	100	100	100	100
8	125						105	100	100	100	100	100
9							100	100	100	100	100	100
10	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C		C	C	100	C	C	C	C
13	105		105				100	100	100	100	B	B
14								100	100	100	100	100
15							125	135	100	100	100	100
16	125			110			110	100	100	100	100	100
17							G	100	100	100	100	100
18							100	100	100	100	100	100
19			105				100	100	100	100	100	100
20				105			G	100	100	100	100	100
21							G	100	100	100	100	100
22			C	C	C	C	C	C	C	C	100	100
23		120	110				100	100	100	100	100	100
24		C	C	C	C		C	C	100	100	100	100
25						140	G	G	100	100	100	100
26	100						G	100	100	100	100	100
27							G	G	G	100	100	100
28					120		G	110	105	100	100	100
29	120	120					G	G	G	100	100	100
30		125	140	120	135	120	120	120	120	120	100	100
31		130	125	120	105		G	110	105	100	100	100
Count	5	4	5	4	3	2	14	23	25	27	27	27
Median	120	..	110	..	..	..	100	100	100	100	100	100
Mean	115	..	115	..	..	..	100	105	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : May 1960

TABLE 54 (contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
100	100	100	100	100	105							1
100	100	100	100	100	100			125				2
100	100	100	100	100	145					125		3
100	100	100	B	100					120	120	120	4
100	100	100	100	100				C	C			5
100	100	100	100	100	C	C						6
100	100	100	100	100	100		C	C				7
100	100	100	G	100	100							8
C	C	C	C	C	C	C	C	C	C	C	C	9
C	C	C	C	C	C	C	C	C	C	C	C	10
C	C	C	C	100	120			C	C		C	11
C	100	100	100	100	115						100	12
B	100	100	100	100	100			120	120	110	120	13
100	100	100	100	100	100	100	100	120	100	125	100	14
100	100	100	100	100	100	115	115	125	115		125	15
100	100	100	100	100	100	100			115	130		16
100	100	G	G	G						120		17
100	100	100	100	100	100					120	120	18
100	100	G	G	G	120							19
100	100	100	100	G				100	100			20
100	100	100	100	100	100	100		100	100	100	100	21
100	100	100	100	100	100	100		100	100			22
C	C	100	100	100	100	100	100	120	120	120		23
C	C	C	C	100	105	120		100	100			24
100	100	100	100	100	100	100			120		120	25
100	100	B	100	100	100	100		100		95		26
100	100	100	100	105	105			100	100			27
100	100	105	115	G	110	110		125	120	140	135	28
100	100	120	G	100	130	130			140	120	120	29
100	100	120	110	120	120	120		140	120			30
100	100	100	100	100	100	160		130	115			31
24	26	24	22	25	19	13	3	14	16	12	10	Count
100	100	100	100	100	100	100	..	120	115	120	120	Median
100	100	100	100	100	105	110	..	115	115	120	115	Mean

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.



Characteristic : (M3000) F2

Unit : ...

Month : May 1960

TABLE 55  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10.2°N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	2.60	2.20	2.20F	F	F	E	2.75	2.70	2.65	2.50	2.30	2.40
2	2.90	2.80	2.75	2.95	3.15	3.20	3.25	3.15	2.90	2.50	2.50	2.40
3	3.15F	3.00	2.90	2.95	3.15	3.35	3.25	3.15	2.85	2.50	2.25	C
4	F	F	3.15	3.25	3.40	3.35	3.25	3.00	2.65	2.30	2.40	2.40
5	F	F	F	F	U3.15F	3.25	3.15	3.10	2.60	2.35	2.35	2.30
6	U2.85F	3.00	3.20	3.20	3.20	3.35	3.10	2.75	2.55	2.20	2.45	2.25
7	U3.05F	2.95	2.70	2.90	2.90	2.45	2.25H	2.80H	2.55	2.40	2.20	2.35
8	2.90	2.90	2.95	3.20	3.25	3.20	3.10	2.90	2.50	2.30	2.35	2.40
9	F	U2.70s	F	Es	F	3.05	2.60	2.70	2.60	2.50	2.35	2.40
10	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	3.40	3.15	C	C	C	C	C	C
13	3.00	3.00	3.00	3.10	3.30	3.40	3.05	2.85	2.50	2.20	2.20	B
14	F	F	F	F	3.40	3.30	3.20	2.95	2.65	2.20	2.20	2.30
15	2.90	2.80	2.85	3.00	3.25	3.20	3.00	3.00	2.80	2.55	2.15	2.25
16	2.95	2.80	2.80	2.95	3.20	3.30	3.10	3.00	2.70	2.25	2.25	2.25
17	U2.35F	F	F	F	U2.50F	2.85	U2.75F	2.80	2.70	2.45	2.20	2.25
18	2.95	3.05	3.10	3.35	3.30	3.30	2.95	2.80	2.60	2.40	2.30	2.30
19	F	F	F	F	F	3.40	3.10	2.90	2.65	2.45	2.30	2.40
20	F	F	F	F	F	F	U3.20F	3.00	2.70	2.20H	2.25	2.30
21	2.80	2.90	2.95	3.40	3.30	3.45	3.20	3.00	2.70	2.30	2.30	2.25
22	2.65	2.70	2.60	C	C	C	C	C	C	C	2.40	2.30
23	F	2.70	2.80	2.95	3.30	3.50	3.00	2.90	2.60	2.30	2.35	2.35
24	F	C	C	C	C	C	C	C	C	2.45	2.35	2.20
25	3.00	2.90	2.80	3.05	U3.45SH	2.70H	3.25	3.20	3.00	2.80	2.40	2.25
26	F	F	F	F	U3.20F	3.40	3.10	3.00	2.70	2.40	2.40	2.20
27	F	2.60	2.75	U3.00s	3.20	3.50	3.35	3.25	2.95	2.85	2.65	2.30
28	2.50	U2.40s	F	F	F	3.10	3.00	2.95	2.70	2.40	2.35	2.40
29	F	2.80	U3.00F	3.40	3.20	FH	U3.20s	3.30	3.25	2.95	2.60	2.20H
30	F	F	F	F	F	F	U2.95F	2.90	2.80	2.60	C	C
31	2.80	2.75	2.65	2.60	2.50	2.45	2.95	2.95	2.70	2.50	2.30	2.25
Count	16	19	18	16	21	23	26	26	26	27	27	2.25
Median	2.90	2.80	2.80	3.00	3.20	3.30	3.10	2.95	2.70	2.40	2.35	2.30
Mean	2.85	2.80	2.85	3.05	3.20	3.20	3.05	2.95	2.70	2.45	2.35	2.30

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M3000)F2

Unit : ..

Month : May, 1960

TABLE 55 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
2.40	2.35	2.30	2.40	2.25	2.30	2.45	2.25	2.15	F	2.60	2.90	1
2.40	2.30	2.30	2.35	2.50	2.50	2.40	2.30	2.35	2.40	F	3.05	2
C	2.20	2.30	2.25	2.25	2.35	2.30	2.15	F	F	F	F	3
2.35	2.35	2.40	2.45	2.40	2.40	2.35	2.15	F	F	F	F	4
2.30	2.35	2.50	2.50	2.50	2.45	2.40	2.25	C	C	F	F	5
2.25	2.35	2.30	2.20	2.35	2.50	C	2.25	F	F	U2.30s	F	6
2.45	2.35	2.40	2.50	2.45	2.50	2.40	C	C	2.40	2.60	2.70	7
2.35	2.40	2.35	2.15	2.35	2.40	2.25	F	F	F	F	F	8
2.35	2.40	C	C	C	C	C	C	C	C	C	C	9
C	C	C	C	C	C	C	C	C	C	C	C	10
C	C	C	C	2.50	C	C	C	2.10	C	C	2.85	11
C	2.20	2.20	2.40	2.45	2.45H	2.35H	U2.15H	U2.10F	2.40	2.70	2.90	12
2.30	2.15	2.20	2.20	2.20	2.40	2.40	2.20	F	F	U2.50F	F	13
2.20	2.25	2.20	2.25	2.50	2.50	2.50	2.40	2.40	2.60	2.75	2.85	14
2.20	2.15	2.15	2.20	2.25	2.35	2.40	2.40	2.45	U2.45F	2.60	2.75	15
2.30	2.20	2.30	2.25	2.35	2.40	2.45	2.35	U2.35F	2.40	2.55F	F	16
2.25	2.45	2.60	2.65	2.75	2.80	2.60	2.40	F	F	F	F	17
C	2.40	2.40	2.30	2.30	2.40	2.40	U2.35s	F	F	F	F	18
2.55	2.55	2.55	2.70	2.75	2.80	2.75	2.50	F	F	F	F	19
2.20	2.30	2.30	C	2.50	2.60	2.65	2.60	2.70	2.70	2.75	2.70	20
2.30	2.30	2.30	2.40	A	2.65	2.70	C	2.45	F	2.45	2.55	21
2.30	2.25	2.20	2.20	2.30	2.40	2.45	2.45	F	F	F	F	22
2.40	C	C	2.40	2.40	2.50	2.60	C	2.45	F	F	F	23
2.10	C	C	C	C	U2.35s	2.25	C	2.25	2.45	U2.70s	U2.95s	24
2.40	2.35	2.30	2.20	2.20	2.35	2.35	U2.40s	F	F	F	F	25
2.25	2.25	2.40	2.30	2.40	2.40	2.50	2.40	2.40	2.40	F	F	26
2.05H	2.05	2.30	2.40	2.50	2.60	2.65	2.45	U2.40s	2.35	F	2.50	27
2.25	2.25	2.30	2.40	2.45	2.55	U2.70s	U2.50s	2.45	U2.55F	F	F	28
2.25	2.25	2.30	2.40	2.50	2.60	2.60	2.35	F	U2.30s	F	F	29
2.15	2.15	2.15	2.30	2.35	2.45	2.50	2.45	2.40	F	2.70	2.75	30
2.25	2.20	2.25	2.35	2.40	2.50	2.60	U2.55s	2.50	U2.55F	2.65	2.80	31
26	27	26	26	27	28	27	23	16	13	13	13	Count
2.30	2.30	2.30	2.35	2.40	2.45	2.45	2.40	2.40	2.40	2.60	2.80	Median
2.30	2.30	2.30	2.35	2.40	2.50	2.50	2.35	2.35	2.45	2.60	2.80	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M3000) F2

TABLE 55 (Contd.)

Latitude : 10°2'N

Unit : ...

Ionospheric Data

Longitude : 77°5'E

Month : May 1960

75°0'E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	2.80	2.20	F	F	E	2.45	2.85	2.60	2.60	2.30	2.35	2.45
2	2.90	2.70	2.75	3.05	3.40	3.25	3.30	3.05	2.70	2.35 <sup>H</sup>	2.35	2.30
3	3.10	2.90	2.85	3.10	3.40	3.15	3.15	3.05	2.70	2.30	2.35	2.30
4	F	3.00	3.25	3.25	3.35	2.90 <sup>H</sup>	3.15	2.85	2.50	2.40	2.40	2.35
5	F	F	F	U3.15 <sup>F</sup>	3.25	3.10	3.10	2.80	2.40	2.35	2.40	2.30
6	2.90	3.10	3.20	3.30	3.30	3.15	2.90	2.60	2.35	2.50	2.35	2.20
7	3.00	2.80	2.80	2.80	2.65	2.40 <sup>H</sup>	2.60 <sup>H</sup>	2.60	2.45	2.30	2.25	2.40
8	2.85	2.90	3.10	3.30	3.20	3.10	3.00	2.70	2.35	2.30	2.40	2.40
9	F <sub>s</sub>	F	F <sub>s</sub>	F	3.25	2.70	2.85	2.70	2.55	2.40	2.25	2.30
10	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	3.30	C	C	2.75	C	C	C	C
13	3.00	2.90	2.95	3.30	3.30	3.00	3.05	2.70	2.30	2.20	B	2.40
14	F	F	F	U3.25 <sup>F</sup>	3.25 <sup>H</sup>	3.05	3.00	2.80	2.45	2.05 <sup>H</sup>	2.30	2.30
15	2.85	2.85	2.95	3.15	3.25	3.05	3.00	2.95	2.65	2.30	2.15	2.25
16	2.90	2.75	2.80	3.00	3.35	3.15	3.10	2.85	2.50	2.10	2.25	2.30
17	U2.30 <sup>F</sup>	F	F	F	U2.65 <sup>F</sup>	2.90	2.80	2.75	2.55	2.25	2.20	2.30
18	F	3.05	3.15	3.40	3.30	3.00	2.90	2.70	2.55	2.35	2.35	2.40
19	F	F	F	F	3.30	3.10	3.05	2.80	2.50	2.35	2.30	2.45
20	F	F	F	F	F	F	3.15	2.90	2.50	2.30	2.35	2.25
21	2.85	2.90	3.05	3.25	3.35	3.20	3.15	2.85	2.50	2.25	2.35	2.20
22	U2.70 <sup>S</sup>	2.65	C	C	C	C	C	C	C	C	2.40	2.25
23	2.70 <sup>F</sup>	2.75	2.90	3.00	3.40	3.05	2.90	2.75	2.40	2.30	2.35	2.35
24	F	C	C	C	C	C	C	C	2.60	2.45	2.30	2.10
25	2.95	2.70	2.90	3.30	3.40	3.10	3.20	3.20	2.90	2.60	2.30	2.35
26	F	F	F	F	3.40	3.15	3.10	2.80	2.50	2.45	2.30	2.20
27	2.70	2.65	2.90	U3.15 <sup>S</sup>	3.40	3.25	3.35	3.15	2.80	2.70	2.50	2.10
28	2.40	2.45 <sup>F</sup>	F	F	F	2.95	3.00	2.85	2.55	2.35 <sup>H</sup>	2.35	2.30
29	F	2.90	3.40	3.20	3.20	3.10	3.30	3.30	3.10	2.80	2.40 <sup>H</sup>	2.05 <sup>H</sup>
30	F	F	F	F	F	F	U2.95 <sup>F</sup>	2.80	2.70	2.50	2.35	2.20
31	2.75	2.75	2.60	2.55	2.55	2.40	2.95	2.80	2.60	2.35	2.30	2.20
Count	17	19	16	18	23	24	26	27	27	27	27	28
Median	2.85	2.80	2.90	3.20	3.30	3.10	3.00	2.80	2.55	2.35	2.35	2.30
Mean	2.80	2.80	2.95	3.15	3.25	3.00	3.05	2.85	2.55	2.35	2.35	2.30

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M3000)F2

Unit : ..

Month : May, 1960

TABLE 55 (Contd.)

Ionospheric Data

[75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.30	2.30	2.45	2.40	2.25	2.30	2.35	2.25	F	F	2.85	2.95	1
2.35	2.30	2.30	2.45	2.55	2.45	2.35	2.35	2.40	2.55	U2.85F	3.05	2
2.25	2.20	2.25	2.20	2.30	2.35	2.25	2.10	F	F	F	F	3
2.30	2.30	2.45	2.40	2.40	2.40	2.25	F <sub>8</sub>	F	F	F	F	4
2.20	2.40	2.50	2.50	2.50	2.40	2.35	2.25	C	C	F	F	5
2.35	2.30	2.20	2.25	2.45	C	C	2.15	F	F	F	3.05	6
2.40	2.35	2.40	2.50	2.50	2.50	2.25	C	C	2.50	2.70	2.80	7
2.30	2.40	2.20 <sub>H</sub>	2.30	2.40	2.35	2.05	F	F	F	F	F	8
C	C	C	C	C	C	C	C	C	C	C	C	9
C	C	C	C	C	C	C	C	C	C	C	C	10
C	C	C	C	2.50	2.35	U2.25 <sub>CH</sub>	C	C	C	2.70	C	11
C	2.20	2.30	2.45	2.45	2.45 <sub>H</sub>	2.30	F	U2.35 <sub>F</sub>	2.50	2.80	3.00	12
2.20	2.20	2.20	2.30	2.40	2.40	2.35	F	F	U2.45 <sub>F</sub>	F	F	13
2.20	2.25	2.20	2.35	2.50	2.50	2.45	2.30	2.45	2.65	2.80	2.90	14
2.20	2.15	2.15	2.20	2.30	2.40	2.40	2.35	2.40	2.50	2.70	2.85	15
2.20	2.25	2.30	2.35	2.40	2.45	2.45	2.30	2.40	2.45	F	F	16
2.30	2.50	2.60	2.65	2.70	2.65	2.50	F	F	F	F	2.85	17
2.40	2.40	2.35	2.30	2.30	2.45	U2.50 <sub>s</sub>	F	F	F	F	F	18
2.55	2.55	2.65	2.75	2.80	U2.85 <sub>s</sub>	2.65	2.40	F	F	F	F	19
2.30	2.35	2.30	2.45	2.55	2.60	2.65	U2.65 <sub>F</sub>	2.70	2.70	2.75	2.75	20
2.30	2.35	2.35	2.45	2.55	2.70	2.60	2.45	F	2.45 <sub>F</sub>	2.50	2.60	21
2.30	2.25	2.20	2.25	2.30	2.40	2.50	2.35	F	F	U2.50 <sub>F</sub>	F	22
C	C	2.30	2.40	2.40	2.55	2.50	2.55	2.45	U2.50 <sub>s</sub>	F	F	23
C	C	C	C	U2.40 <sub>s</sub>	U2.30 <sub>s</sub>	2.25	2.20	2.35	2.60	U2.80 <sub>s</sub>	2.90	24
2.35	2.30	2.25	2.20	2.30	2.35	2.30	U2.35 <sub>F</sub>	F	F	F	F	25
2.25	2.30	2.35	2.35	2.40	2.50	2.45	2.40	2.40	2.45	F	F	26
U2.10 <sub>w</sub>	2.15	U2.40 <sub>w</sub>	2.45	2.50	2.60	2.60	2.40	2.35	2.40	F	U2.55 <sub>s</sub>	27
2.25	2.25	2.35	2.45	2.55	2.60	U2.60 <sub>s</sub>	2.45	J2.45 <sub>F</sub>	F	F	F	28
2.25	2.25	2.45	2.40	2.50	R	2.50	2.30	F	F	F	F	29
2.15	2.20	2.25	2.30	2.40	2.50	2.50	2.35	2.50	2.60	2.70	2.90	30
2.20	2.15	2.25	2.35	2.45	2.55	2.60	2.50	U2.55 <sub>F</sub>	2.60	2.75	2.95	31
25	26	27	27	29	27	28	21	13	15	13	14	Count
2.30	2.30	2.30	2.40	2.45	2.45	2.45	2.35	2.40	2.50	2.75	2.90	Median
2.30	2.30	2.35	2.40	2.45	2.45	2.40	2.35	2.45	2.55	2.70	2.85	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F2

Unit : Mc

Month : June, 1960

TABLE 56  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	C	8.1	7.1	6.8	6.4	6.9	9.1	11.4	12.3	12.3 <sub>H</sub>	12.3	11.2
2	10.9	8.8	7.8	7.0	6.5	6.1	8.6	10.9	12.0	12.7	12.8	11.8
3	F	F	F	F	F	U6.1 <sub>F</sub>	8.6	10.4	11.4	11.4	10.3	10.2
4	8.0	7.1	6.5	5.2 <sub>F</sub>	F	5.4 <sub>F</sub>	7.3	9.5	10.9	11.1	10.3 <sub>H</sub>	10.6
5	C	C	C	C	C	C	C	C	11.3	11.8	11.6	12.1
6	8.7	7.7	U7.3 <sub>F</sub>	6.6	6.0	5.5	7.7	10.4	10.9	11.7	11.5	12.4
7	U9.9 <sub>s</sub>	10.3	8.7	8.1	7.6	6.1	7.9	10.0	11.4	11.9	11.3	11.8
8	9.1	8.6	7.6	7.8	7.0	6.5	8.6	9.2	9.8	9.8	10.4	10.9
9	F	F	F	8.0	6.2	4.0	7.9	10.6	11.1	11.6	10.3	10.2
10	11.0 <sub>H</sub>	8.1	8.0	7.5	6.9	7.7	9.8	11.0	10.9	11.1	10.9	10.8
11	9.1	7.9	7.4	7.3	6.5 <sub>F</sub>	U6.5 <sub>F</sub>	8.6	9.5	10.7	10.7	10.3	10.0
12	F	F	F	F	F	F	8.8	C	11.0	11.3	10.8 <sub>H</sub>	10.0
13	7.3 <sub>F</sub>	6.7	6.7	6.2	6.4	5.7	8.0	10.0	11.1	11.6	10.8	10.4
14	7.8	F	F	F	F	5.1	7.6	9.8	10.9	U10.9 <sub>R</sub>	10.8	9.9
15	U5.9 <sub>s</sub>	5.1	5.1	F	F	F	6.6	U9.6 <sub>s</sub>	11.3	11.5	10.9	10.1
16	9.2	8.4	7.6	F	5.2 <sub>F</sub>	F	7.4 <sub>F</sub>	9.8	10.6	10.4	10.0	9.7
17	F	F	F	F	7.7	5.9	7.7	9.3	10.2	10.5	10.4	9.2
18	F	6.6	5.6	5.5	4.1	3.5	6.1	8.8	9.6	10.1	9.4	9.4
19	6.8	5.3	5.1	4.7	4.3	4.8	6.6 <sub>H</sub>	8.6	C	C	C	C
20	7.8	6.8	5.7	5.3	4.5	4.3	6.9	8.6	9.5	9.1	9.2	9.3
21	8.0	6.9	6.4	5.8	4.1	3.5	7.3	9.1	10.0	10.8	10.7	10.2
22	6.5	5.3	F	F	F	2.8 <sub>H</sub>	6.9	9.4	10.5	11.2	11.5	11.7
23	F	F	F	F	F	F	U7.9 <sub>F</sub>	9.3	9.4	C	11.8	12.1
24	U5.0 <sub>s</sub>	4.5	4.0	3.5	3.3	2.3	6.1	8.7	10.6	10.6	10.8	10.7
25	5.8 <sub>F</sub>	5.0 <sub>F</sub>	3.9	2.8	2.5 <sub>F</sub>	2.7 <sub>H</sub>	6.5	9.2	10.2	11.0	11.0	11.0
26	F	F	F	F	U2.8 <sub>F</sub>	2.6	6.8	9.4	10.0	10.5	11.4	10.6
27	4.8	4.0	3.3	3.2	3.0	2.9	6.6	U9.6 <sub>s</sub>	U9.6 <sub>R</sub>	8.9	10.2	11.2
28	F	F	F	F	E	E	7.2	10.3	10.4	11.4	12.4	12.1
29	U10.2 <sub>s</sub>	8.6	U6.4 <sub>s</sub>	4.9	3.9	3.4	6.6	9.6	11.0	12.0	12.4	11.6
30	9.0	7.0	6.2	5.3	4.6	3.9	6.8	8.4	10.0	10.4	10.6	11.1
Count												
Median												
Mean												

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F2

Unit : Mc

Month : June, 1960

TABLE 56 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
10.9	11.3	B	12.7	12.3	U11.9s	11.8	11.3	10.1	10.4	11.1	11.4	1
10.5	10.0	10.3	10.4	10.8	11.8	12.7	11.1	F	F	F	F	2
9.7	9.9	10.6	11.5	12.4	12.6	13.0	11.2	9.9F	8.9	F	U8.6F	3
10.8	11.1	11.7	12.3	11.8	11.0H	U9.8s	9.0	9.2	C	C	C	4
12.1	11.4	10.9	11.1	11.1	11.4	11.5	11.2	10.9	10.2	10.2	9.5	5
12.0	12.4	12.5	12.4	12.6	12.6	12.0	10.7	10.2	9.7F	9.6	9.8	6
11.4	11.0	11.6	12.0	12.4	13.3	13.6	11.7	10.3	10.3	U10.6F	U9.7F	7
11.7	12.5	12.7	13.0	13.2	12.8	12.3	11.2	F	F	F	F	8
10.7	11.5	11.7	12.0	12.5	13.1	12.8	11.8	10.4	9.6	10.3	11.0	9
10.9	11.3	11.4	12.1	12.5	13.2	13.5	12.7	11.6F	U10.4F	9.8F	9.8	10
10.2	10.5	11.3	12.3	12.2	12.3	13.1	12.4	11.0	F	F	F	11
10.8	11.4	12.0	12.3	11.7	13.6	13.7	12.5	10.4	9.2	8.5	F	12
9.9	9.8	10.1	10.6	10.8	11.3	U11.8s	11.1	F	F	F	Fs	13
9.4	9.7	10.6	11.3	11.8	12.4	12.1	11.8	11.4	10.6	9.1	6.7	14
9.9	10.0	10.7	11.7	12.2	12.6	12.7	11.9	10.8	11.0	9.7	9.9	15
9.6	10.0	10.6	11.4	11.0	10.6	10.4	9.6	U8.8F	F	F	F	16
9.0	9.2	10.0	10.9	11.0	11.5	11.4	11.5	9.7	F	8.1	U7.7F	17
9.5	10.0	10.7	11.4	11.6	11.2	11.5	11.3	9.8	9.6	9.9	8.5	18
C	C	10.7	10.8	11.4	12.0	11.7	11.6	10.6	10.2	10.9	10.9	19
9.8	10.4	10.5	11.0	11.7	12.7	12.7	11.6	10.3	9.3	9.2	9.1	20
10.0	10.3	10.9	11.7	12.3	12.8	13.5	10.8	U9.5s	7.7	U7.0s	U6.6s	21
10.8	10.0	10.0	10.0	10.1	10.5	11.0	10.4	U9.3F	F	F	F	22
12.0	12.3	11.8	11.5	11.5	11.7	11.7	12.6	11.4	9.2	7.8	U6.3s	23
10.1	9.8	10.1	10.4	10.8	11.6	U12.0s	12.4	11.2	U9.5s	S	U6.3F	24
10.0	9.8	9.8	10.3	11.0	12.6	12.8	11.3	F	F	F	F	25
10.1	10.0	11.2	U12.0s	13.0	13.6	13.0	11.0	U9.3s	C	6.8H	5.7	26
12.0	12.2	12.6	12.0	12.6	13.0	13.3	12.4	11.3	F	F	F	27
11.0	10.8	11.2	11.0	10.8	11.1	11.4	U11.8s	U10.4F	9.4	9.2	9.7	28
10.8	11.0	11.2	11.4	12.0	12.6	12.0	U11.6s	F	F	U10.0F	U9.6s	29
11.7	11.8	11.8	10.7	11.0	11.4	11.5	10.2	U9.2s	F	F	F	30
29	29	29	30	30	30	30	30	25	17	18	19	Count
10.7	10.5	10.9	11.4	11.8	12.4	12.0	11.4	10.3	9.6	9.6	9.5	Median
10.6	10.7	11.1	11.5	11.7	12.2	12.2	11.4	10.3	9.7	9.3	8.8	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F2

Unit : Mc

Month : June, 1960

TABLE 56 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	8.9	7.5	6.9	6.7	6.6	7.9	10.1	11.8	12.3H	12.4H	11.8	U10.9R
2	9.9	8.1	7.1	6.8	6.1	7.3	9.9	11.5	12.7	12.6	12.5	10.8
3	F	F	F	F	F	6.9	9.7	11.1	11.5	10.9	10.0	10.1
4	7.4	6.9	5.9F	F	F	6.4	8.2	10.2	11.4	11.0H	10.2	10.9
5	C	C	C	C	C	C	C	10.2	11.8	11.5	11.8	12.1
6	8.3	7.6	6.8	U6.2s	6.0	5.8	9.3	11.2	11.4	11.5	11.7	12.0
7	10.6	9.2	8.5	7.7	7.4	6.4	9.6	10.7	11.7	11.9	11.6	11.6
8	8.4	7.8	7.8	7.4	6.4	7.5	8.9	9.2	10.0	9.9	10.7	11.4
9	F	F	U8.4F	7.9	4.9	5.7	9.6	10.9	11.6	11.5H	10.1	10.4
10	9.6	7.8	7.9	7.0	7.4	8.8	10.6	10.9	10.9	10.9	11.0	10.8
11	8.4	7.9	7.3	6.9	U6.6F	7.5	9.1H	10.1	10.8	10.4	10.3	9.9
12	F	F	F	F	F	F	10.4	11.3	11.3	C	9.9	10.3
13	6.9	6.9	6.4	6.3	6.4	6.3	9.1	C	11.5	11.3	10.6	10.2
14	U7.2s	F	U5.5F	F	F	6.3	9.4	10.3	U11.0R	11.3	10.4	9.8
15	5.2	5.1	F	F	F	4.5	8.3	10.5	11.6	11.0H	10.7	10.0
16	8.6	8.2	F	F	5.3	U6.4F	8.6	10.0	10.6	10.2	9.6	9.5
17	F	F	F	7.8	7.1	6.5	8.6	10.0	10.5	10.7	9.6	9.1
18	U7.3F	5.9	5.4	4.8	3.6	4.9	7.4	9.1	10.0	9.8	9.3	9.3
19	5.7	5.1	4.9	4.3	4.8	5.4	7.8	9.2	C	C	C	C
20	7.0	6.3	5.4	4.9	4.3	5.5	7.9	9.0	9.3	9.2	9.0	9.8
21	U7.5s	6.6	5.8	4.7	3.8	5.2	8.3	9.1	10.5	10.8	10.7	10.1
22	6.0	U4.4R	F	F	F	5.0	8.6	9.7	10.9	11.1	11.6	11.5
23	F	F	F	F	F	F	9.1	9.0	10.4	C	12.1	12.0
24	U5.0s	4.1	3.6	3.6	2.9	4.5	7.6	9.4	10.7	10.8	10.9	10.6
25	5.6F	4.5	3.2	2.6	F	4.4	8.2	10.0	10.8	11.0	10.9	10.6
26	F	F	F	F	2.6	4.4	8.6	9.5	10.5	10.9	11.3	10.2
27	4.3	3.6	3.2	3.3	2.8	4.9	8.4	9.6	9.4	9.4	10.4	11.8
28	F	F	F	E	E	4.4	9.2	10.3	10.8	U12.2R	12.3	11.6
29	9.6	U7.5s	U5.4s	4.2	2.6	4.9	8.5	10.4	11.8	12.2	12.0	11.3
30	7.8	6.6	5.6	4.8	4.5	5.2	7.8	9.0	10.7	10.8	10.7	11.4

Count	22	21	20	20	21	27	29	29	29	27	29	29
Median	7.4	6.9	5.8	5.6	4.9	5.7	8.6	10.1	10.9	11.0	10.7	10.6
Mean	7.5	6.6	6.0	5.7	5.1	5.9	8.8	10.1	11.0	11.0	10.8	10.7

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F2

Unit : Mc

Month : June, 1960

TABLE 56 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
11.3	11.3	12.4	12.5	12.0	U12.0s	U11.8FS	J10.0R	10.3	10.8	11.4	11.4	1
9.9	10.0	10.5	10.7	10.9	12.4	11.9	10.2	F	F	F	F	2
9.8	10.0	10.9	12.3	12.3	12.8	12.2	10.4F	9.4F	8.5F	F	8.6F	3
10.9	11.4	12.0	12.5	11.2	U10.9HR	9.0	9.0	9.3	C	C	C	4
11.8	10.9	11.0	11.2	11.2	11.5	11.4	11.0	10.8	10.0	10.0	9.2	5
12.4	12.3	12.4	12.7	12.9	12.5	11.4	10.3	U9.5F	9.8	9.8	U9.9s	6
11.3	11.2	11.8	11.8	13.0	13.5	13.0	11.0	10.4	U10.6F	U10.6F	9.4	7
12.1	12.6	13.0	12.8	13.0	12.6	U11.6s	10.6F	F	F	F	F	8
11.0	11.6	11.9	12.2	12.9	13.2	12.7	11.2	10.0	9.8	11.0	11.5	9
10.9	11.4	11.7	12.5	12.7	13.4H	13.6	12.0	U10.8F	10.0F	9.8	9.8	10
10.3	10.8	11.8	12.3	12.2	12.7	12.8	U11.7s	U10.4F	F	F	F	11
11.1	11.9	C	12.0	12.8	13.8	13.3	U11.6s	9.6	8.7	8.3	7.5	12
9.7	10.0	10.3	10.7	11.0	11.6	11.7	10.4	F	F	U10.3s	F	13
9.4	10.2	11.0	11.7	12.0	12.7	12.0	11.5	11.0	10.1	8.1	6.6	14
C	10.3	11.3	11.9	12.3	12.7	12.7	11.3	10.7	10.3	9.7	9.9	15
9.6	10.3	11.0	11.2	10.8	10.6	9.6	U9.4F	F	F	F	F	16
9.0	9.6	10.4	10.7	11.2	11.4	11.7	11.0	9.3	8.3	7.5	U7.7F	17
9.7	10.4	11.0	11.6	11.6	11.4	11.7	10.8	9.6	9.4	9.8	7.1	18
C	10.6	10.8	11.0	11.8	12.0	11.7	11.0	10.4	10.5	11.0	9.2	19
10.2	10.5	10.6	11.3	12.2	12.7	12.4	10.9	9.7	9.0	9.2	8.5	20
10.0	10.5	11.5	11.9	12.7	13.3	J12.0s	10.3	8.5	U7.1s	U6.7s	6.8	21
10.6	9.8	10.1	9.9	10.3	10.8	11.0	10.0	F	F	F	F	22
12.0	12.1	11.7	11.6	11.4	11.7	12.3	13.3	9.9	8.4	6.7	5.4	23
9.4	9.9	9.8	10.7	11.4	12.6	12.1	11.6	10.5	8.8	F	U5.8s	24
10.0	10.0	10.0	10.8	11.6	13.0	12.2	10.4	F	F	F	F	25
10.2	10.7	11.8	12.5	13.3	13.6	U12.3s	U10.0s	8.7	7.0	5.8	U5.3s	26
12.0	12.6	12.4	12.3	12.6	13.0	12.8	12.0	10.9	F	F	F	27
10.6	11.0	11.1	10.9	10.9	11.1	U11.6s	11.0	U9.7s	U9.2s	9.2	10.2	28
10.6	11.2	11.0	11.6	J12.2R	12.4	U11.8s	11.4	F	F	U10.2s	9.2	29
12.0	11.6	11.4	10.8	11.4	11.8	10.8	9.6	8.2	F	F	F	30
28	30	29	30	30	30	30	30	23	19	19	20	Count
10.6	10.8	11.1	11.6	12.0	12.6	12.0	11.0	9.9	9.4	9.8	8.9	Median
10.6	10.9	11.3	11.6	11.9	12.3	11.9	10.8	9.9	9.3	9.2	8.4	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : fo F1

TABLE 57

Latitude : 10°2'N

Unit : Mc

Ionospheric Data

Longitude : 77°5'E

Month : June, 1960

75°0'E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5							C	C	L	L	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8							L	L	L	L	L	L
9								L	L	L	L	L
10							L	L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L <sup>LH</sup>	L	L <sup>LH</sup>	L
14								L	L	L	L	L
15								L	L	L	L <sup>LH</sup>	L <sup>LH</sup>
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19							L	L	C	C	C	C
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L <sup>LH</sup>	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
Count							..	..	..	..	..	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : Fo F1

Unit : Mc

Month : June, 1960

TABLE 57 (Contd.)

Ionospheric Data

75.0 E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	B	B	B	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
L	L	A	L	L	L							4
L	L	L	L	L	L							5
L	L	L	L	L	A							6
L	L	L	A	L	L							7
L	L	L	L	L	L							8
L	L	L	L	L	L							9
L	L	L	L	L	L							10
L	L	L	L	L	A							11
L	L	L	L <sub>H</sub>	L	L							12
L	L	L <sub>H</sub>	L	L	L							13
L	L <sub>H</sub>	L <sub>H</sub>	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
C	C	L	L	L	L							19
L	L	L	L	L	L	L						20
L	L <sub>H</sub>	L <sub>H</sub>	L	L	L							21
L	L	L <sub>H</sub>	L	L	L							22
L <sub>H</sub>	L <sub>H</sub>	L	L	L	L							23
L	L	L	L	L	L							24
5.1	L	L	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
1	..	..	..	..	..	..						Count
..	..	..	..	..	..	..						Median
..	..	..	..	..	..	..						Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : Fo F1

Unit : Mc

Month : June 1960

TABLE 57 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	L
2							L	L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	L	L
6								L	L	L	L	L
7							L	L	L	L	L	L
8							L	L	L	L	L	L
9								L	L	L	L	L
10							L	L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								C	L	L	L	L <sub>H</sub>
14							L	L	L	L	L	L <sub>H</sub>
15								L	L	L	L <sub>H</sub>	L
16							L	L	L	L	L	L
17							L	L	L	L	L	L
18							L	L	L	L	L	L
19							L	L	C	C	C	C
20							L	L	L	L	L	L
21								L	L	L	L	L
22								L	L <sub>H</sub>	L	L	L
23								L	L	C	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26							L	L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
Count							..	..	..	..	..	2
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : Fo F1

Unit : Mc

Month : June, 1960

TABLE 57 (Contd.)

Ionospheric Data

75°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	B	B	L	L							1
L	L	L	L	L	L							2
L	C	A	L	L	L							3
L	L	L	L	L	L							4
												5
L	L	L	L	A	L							6
L	L	L	L	L	L							7
L	L	L	L	L	L							8
L	L	L	L	L	L							9
L	L	L	L	L	L							10
L	L	L	L	A	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
1	1	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE

Unit : Mc

Month : June 1960

TABLE 58  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10·2°N

Longitude : 77·5°E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								2·9	A	3·6	A	A
2								2·9	3·3	A	A	A
3								2·9	A	A	A	A
4								2·9	U3·3R	A	A	R
5							C	C	3·4H	3·7	A	A
6								A	A	A	A	A
7								A	3·4	A	A	A
8								A	A	A	A	A
9								A	A	A	A	A
10								A	A	A	A	B
11								A	A	A	A	A
12							2·3H	2·9H	A	A	A	B
13								U2·9R	A	A	A	A
14							U1·8R	R	R	A	A	A
15								A	B	A	A	A
16								A	A	A	A	A
17							2·3	A	A	A	A	A
18							R	A	A	A	A	A
19							R	A	C	C	C	C
20							A	A	A	A	A	A
21								U2·7R	A	A	A	A
22								U2·9H	A	A	A	A
23								2·7H	3·2H	C	A	A
24							R	A	A	A	A	A
25								2·7H	A	A	A	A
26								A	A	A	B	A
27							2·0	A	A	A	B	B
28							A	A	A	R	A	A
29								B	A	U3·8R	A	A
30							R	2·8	3·4	B	R	U3·8R

Count	4	11	6	3	..	1
Median	..	2·9	3·4	..	..	..
Mean	..	2·8	3·3	..	..	..

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : foE

Unit : Mc

Month : June 1960

TABLE 58

Ionospheric Data

75.0 E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
B	A	B	B	B	A							1
A	A	A	A	A	A							2
A	A	A	3.7	3.2	2.7							3
A	R	A	A	A	A							4
A	A	A	A	A	2.6							5
A	A	A	A	A								6
A	A	A	A	A	A							7
A	B	A	A	A	A							8
A	A	A	A	3.4H	A	A						9
A	A	A	A	A								10
A	A	U3.8R	A	A	A							11
B	B	A	A	A	A							12
A	B	A	A	A	A							13
A	A	A	3.5	3.2								14
A	A	A	U3.4R	3.3								15
B	A	A	A	A	A							16
A	A	A	A	A	A							17
A	A	A	A	A	2.2							18
C	C	A	A	A	A							19
A	A	A	A	A	2.5	R						20
A	A	A	A	U3.0R	U2.6R							21
A	A	A	A	A	A							22
A	A	U3.8A	A	3.2H								23
A	A	A	A	3.0	A							24
A	A	A	A	A	U2.8R							25
A	A	A	A	3.2	R							26
B	B	A	A	A								27
A	A	A	3.6	U3.4A	2.8							28
A	A	3.9	A	3.3	2.8							29
A	A	A	A	A	A							30
..	..	3	4	10	8	..						Count
..	..	..	..	3.2	2.6	..						Median
..	..	..	..	3.2	2.6	..						Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE

Unit : Mc

Month : June 1960

TABLE 58 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								3.2	A	3.8	A	A
2								3.1	A	A	A	A
3								3.1	A	A	A	A
4							2.6	3.1	A	A	4.1	A
5								3.1	3.4	3.8	A	A
6							2.4H	A	A	A	A	A
7							2.5	3.1	A	A	A	A
8							A	A	A	A	A	A
9							2.8	A	A	A	A	A
10							2.7	A	A	A	B	A
11							R	A	A	A	A	A
12							2.6H	C	A	A	A	B
13							U2.3R	R	A	A	B	A
14							A	A	A	A	A	C
15												
16							A	A	A	A	A	A
17							A	A	A	A	A	A
18							2.6	A	A	A	A	A
19							A	A	C	C	C	C
20							B	A	A	A	A	A
21								A	A	A	A	A
22							U2.5H	A	A	A	A	A
23								2.9H	3.4H	C	3.9	U3.9R
24							A	A	A	A	A	A
25							2.3	3.0	A	A	A	A
26							2.4	A	A	A	A	A
27							2.2	A	A	B	B	B
28							2.4	R	R	A	A	A
29								R	3.6	A	R	4.0
30							U2.4R	3.2	U3.4R	R	R	A
Count							14	9	4	2	2	2
Median							2.4	3.1	..	..	..	..
Mean							2.5	3.1	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE

Unit : Mc

Month : June, 1960

TABLE 58 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	B	B	B								1
A	A	A	A	A	2.5							2
A	A	3.8	3.5	3.1	R							3
A	C	A	A	A								4
A	A	A	A	A								5
A	A	A	A	A								6
A	A	A	A	A								7
A	A	A	A	3.0								8
A	A	A	A	A	A							9
A	A	A	A	A								10
A	A	A	A	A	A							11
B	A	A	A	A								12
A	A	A	A	A								13
A	A	A	3.4	R								14
C	A	A	U3.1R	R								15
A	A	A	A	A	F							16
A	A	A	A	A								17
A	A	3.7	3.4	2.9	A							18
C	A	A	A	A	A							19
A	A	A	A	2.9	R							20
A	A	A	A	R								21
A	A	A	A	A								22
A	A	U3.7A	A	3.0								23
A	A	A	3.5	A								24
A	A	A	B	A								25
A	A	A	3.5	B								26
A	A	A	A	A								27
A	A	3.8	A	A								28
A	A	A	3.5	3.0								29
A	A	A	A	A								30
..	..	4	7	6	1							Count
..	..	..	3.5	3.0	..							Median
..	..	..	3.4	3.0	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : foEs

Unit : Mc

Month : June 1960

TABLE 59  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1			3.3	2.5				G	10.0	7.6	10.8	11.4
2	C	5.0	2.8	7.0	9.2			G	G	9.4	10.9	12.0
3		2.6						G	8.0	10.4	11.4	11.4
4								G	8.4	11.0	11.0	8.0
5	C	C	C	C	C	C	C	C	G	G	10.8	12.4
6			1.8	1.9				8.0	9.0	11.5	11.4	12.0
7								8.2	G	10.8	12.0	11.8
8		4.8					6.0	10.4	10.4	11.0	10.4	12.0
9								6.0	11.8	11.0	12.0	11.4
10								8.8	9.6	9.8	11.4	11.0
11								8.5	9.6	10.4	11.9	11.7
12							G	G	7.9	10.8	11.8	11.8
13				4.9			3.0	7.9	5.8	11.5	12.0	11.4
14	9.8						G	G	G	9.8	10.8	10.9
15	U4.4s							8.6	8.3	12.2	11.8	11.8
16							2.8	9.0	9.6	10.9	11.8	11.8
17				1.7			G	6.8	8.8	10.8	11.7	12.2
18		2.4	1.7				7.4	8.5	9.2	10.6	11.8	12.2
19	4.6			2.0			G	7.6	C	C	C	C
20				3.8			5.6	8.8	10.4	10.8	10.8	11.0
21					U4.2s			G	8.7	10.8	12.6	11.8
22	2.6			3.3				3.1	9.3	10.3	11.8	11.8
23								4.8	G	C	11.6	10.8
24	U5.0s						G	8.0	9.0	8.0	12.0	11.8
25	3.6	6.0	4.6	6.2	2.8			G	4.8	11.0	12.0	12.0
26	3.0							9.8	11.3	10.8	11.6	12.0
27	7.0	8.0	6.8	6.4			G	9.0	11.0	11.2	9.0	G
28	3.2						3.0	4.0	G	G	10.4	12.6
29	2.5							G	8.2	G	11.0	9.0
30		6.0	4.1				G	7.0	7.0	B	G	7.0
Count	10	7	7	10	3	..	13	29	29	27	29	29
Median	4.0	5.0	3.3	3.6	..	..	G	7.0	8.7	10.8	11.6	11.8
Mean	4.6	5.0	3.6	4.0	..	..	4.6	7.6	9.0	10.5	11.4	11.3

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : June, 1960

TABLE 59 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
11.4	12.0	B	B	B	7.8				7.0			1
10.8	11.0	10.6	9.2	8.6						2.6		2
11.2	11.4	10.0	G	G	G							3
11.6	G	19.0	9.6	9.6	8.0			4.4	C	C	C	4
12.0	11.7	11.0	9.6	9.0	G			7.0	4.6	3.0		5
12.2	12.4	10.6	10.6	9.2	7.8	6.4	3.6	7.0	8.2	11.6		6
11.6	12.2	11.4	18.4	17.0	17.0	7.8						7
10.4	B	9.6	10.4	8.6	6.8							8
11.6	12.0	12.4	11.4	7.6	9.8	8.6	3.8		8.6	6.6		9
11.2	10.8	8.0	10.0	8.0								10
11.8	11.6	8.8	10.2	10.6	11.9	C						11
11.8	11.3	11.3	10.6	9.6	9.1	10.8	8.0	4.6	3.7	6.6		12
12.4	10.9	18.7	11.8	10.8	5.9	4.8	2.9				3.3	13
12.4	11.9	11.4	G	G			1.9	6.6				14
11.9	11.6	11.1	G	G	3.0							15
10.8	11.4	10.6	10.6	9.4	6.8				3.8	2.5	2.4	16
11.6	16.2	14.0	20.0	8.3	6.8	6.0	4.6	2.0	2.1	4.0	1.7	17
11.6	11.2	11.0	8.2	9.4	6.4			2.7	2.0			18
C	C	10.8	9.5	7.0	10.6	4.1		3.7	4.0	4.8		19
11.2	10.6	11.0	9.0	6.4	G	3.6						20
11.6	11.9	9.8	5.4	G	G				2.5	u4.8s	u4.6s	21
12.4	11.4	12.0	10.4	9.0	12.8	12.6	9.0	3.0			3.0	22
10.2	10.0	11.0	8.4	8.0	8.0	u6.0s						23
12.0	13.0	11.0	8.4	G	3.4		4.4			2.8	2.8	24
12.2	12.0	12.6	9.6	9.2	G					3.0		25
12.0	10.0	9.0	9.0	G	G				C	2.4		26
G	11.0	11.0	10.0	6.0		3.2				3.2	3.0	27
12.0	11.4	10.8	7.4	7.0	G				2.0	1.8	2.0	28
13.0	9.0	12.0	8.0	G	4.0							29
12.0	12.0	12.0	12.0	10.0	8.2	2.6					2.3	30
29	28	29	29	29	26	12	8	9	11	14	9	Count
11.6	11.4	11.0	9.6	8.3	6.8	6.0	4.1	4.4	3.8	3.1	2.8	Median
11.7	11.6	11.4	10.3	9.0	8.1	6.4	4.8	4.6	4.4	4.3	2.8	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : June 1960

TABLE 59 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1			5.0					G	9.6	8.4	11.2	11.4
2	2.9	3.0	4.4	8.0	5.8			G	9.2	10.0	10.8	11.0
3								G	8.4	11.0	11.2	11.4
4							G	G	11.0	11.4	G	11.2
5								G	G	G	12.6	12.0
6		2.1					G	9.0	11.0	9.8	10.4	11.2
7							G	G	10.0	11.8	11.8	12.4
8		3.0					7.8	12.0	11.2	12.0	10.7	10.8
9							G	8.8	12.2	12.0	11.8	11.6
10							7.0	8.4	10.8	11.8	11.4	11.6
11	3.0						6.4	8.8	9.6	11.8	11.8	11.4
12							G	8.8	10.7	C	11.6	12.4
13				3.8			7.8	C	9.6	11.8	11.6	11.8
14	9.8						G	G	9.6	10.1	11.0	11.8
15							6.8	9.3	10.8	11.7	11.8	10.9
16				1.9			3.6	8.8	10.9	11.6	11.6	11.4
17							6.6	8.5	10.8	10.6	11.4	11.4
18	2.0	2.0					6.7	7.6	9.8	10.8	11.6	11.8
19			3.4	1.9		4.2	7.0	9.4	C	C	C	C
20				3.7		2.3	7.6	9.3	10.4	11.2	11.6	11.2
21							3.1	4.4	9.4	12.6	12.2	11.8
22			2.2				G	7.8	8.8	12.4	12.1	12.0
23								G	7.0	C	G	G
24	4.0						7.8	9.0	11.0	12.6	12.0	12.0
25	7.0	3.4	2.7	2.6			G	6.0	7.0	11.2	11.6	12.0
26							4.0	12.6	10.4	12.0	12.4	12.0
27	7.0	3.2					G	10.2	12.0	B	8.0	G
28							4.0	G	G	10.2	12.0	12.0
29	2.6							G	G	9.0	G	9.0
30	2.8	3.0	3.4				G	G	G	G	G	10.3
Count	9	7	6	6	1	2	24	29	29	26	29	29
Median	3.0	3.0	3.4	3.2	..	..	3.8	7.8	9.8	11.3	11.6	11.4
Mean	4.6	3.1	3.5	3.6	..	..	6.1	8.8	10.0	11.2	11.4	11.5

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : June 1960

TABLE 59 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
11.6	11.4	B	B	B							2.8	1
11.0	10.8	10.6	9.0	6.6	G				2.3	2.5		2
11.2	10.6	G	G	G								3
11.0	C	9.8	9.6	8.4				6.0				4
12.0	11.0	10.0	9.4	7.8			3.4	6.0	3.0			5
13.0	11.0	10.8	10.8	8.6	8.6		4.4	8.0	8.8	8.0		6
12.2	12.0	10.4	19.6	14.6	11.2			3.0	3.0			7
8.0	10.0	8.6	10.2	G								8
12.4	11.8	9.7	8.8	11.0	8.6	7.0		3.6	7.4			9
11.4	8.6	8.0	8.2	7.8		2.8					2.4	10
12.4	10.8	8.7	7.5	11.3	8.4	4.8			2.3	2.0	2.7	11
12.3	11.4	C	10.7	7.8	7.8	6.8	6.0	4.3	4.2	4.0		12
11.8	12.6	10.8	12.0	7.8	3.7	4.5s		2.1			8.4	13
11.5	11.6	8.6	G	G	3.7	3.6	4.8					14
C	11.7	8.3	G	G	3.4							15
11.0	10.8	8.8	9.8	7.6	6.6			3.4	4.5	2.2	2.2	16
10.8	14.2	17.4	19.0	9.4	4.2	9.2	2.8	2.0	4.4	2.1	1.9	17
11.4	11.2	G	6.8	6.8	6.4			3.9	1.9			18
C	11.6	8.8	7.8	6.6	10.6			7.8	3.7			19
9.4	10.6	8.4	7.6	G	2.6	1.9						20
11.4	10.6	8.0	7.8	G					2.7	7.8s	4.4	21
13.0	12.0	10.6	11.2	12.0	11.0	11.0	7.0			1.9	4.0	22
11.4	11.4	9.0	8.0	4.0	7.0							23
12.4	12.0	10.1	7.2	7.0	2.4	4.4		2.2			6.0	24
12.0	14.2	11.4	4.4	4.0	3.1	4.4						25
12.0	10.6	10.0	7.0	G	3.1						5.0	26
11.0	12.0	10.0	4.0	3.6	6.6	3.4			2.0	3.3	2.4	27
10.8	11.6	8.0	10.4	8.0	3.1					2.0	2.0	28
12.0	8.6	9.8	G	4.2	3.2			2.0				29
11.0	11.6	11.0	12.0	9.0	7.0s	2.2						30
28	29	28	29	29	23	13	6	13	13	10	12	Count
11.4	11.4	9.8	8.2	7.0	6.4	4.4	4.6	3.6	3.0	2.4	2.8	Median
11.5	11.3	9.8	9.6	7.9	6.0	5.1	4.7	4.2	3.9	3.6	3.7	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc

Month : June, 1960

TABLE 60  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1			1.8	1.7				G	3.6	3.8	3.9	4.2
2	C	2.0		2.3	2.3			G	G	4.3	3.9	4.2
3								G	3.4	3.7	3.8	4.1
4								G	3.4	3.7	3.9	4.4
5	C	C	C	C	C	C	C	C	G	G	4.0	4.1
6			1.6	1.6				3.0	3.4	3.8	4.1	4.0
7		2.0						3.0	G	3.9	4.2	4.1
8							2.4	3.0	3.5	4.0	4.2	4.3
9								3.1	3.6	4.0	4.2	4.4
10								3.1	3.5	3.9	4.0	4.6
11								3.0	3.5	3.9	4.0	4.4
12							G	G	3.8	4.1	4.3	
13				1.8			2.5	3.3	4.2	4.4	4.1	4.3
14	2.5						G	G	G	3.9	4.1	4.3
15								3.0		3.8	4.1	4.2
16							2.2	3.1	3.6	3.8	4.0	4.2
17							G	3.0	3.4	3.8	3.9	4.0
18		1.9	1.7				2.2	3.0	3.4	3.8	3.9	4.0
19				1.4			G	2.8	C	C	C	C
20				2.0			2.2	2.9	3.3	3.7	4.0	4.1
21								G	3.3	3.9	3.9	4.2
22				1.3				2.9	3.3	3.6	3.9	4.0
23									G	C	3.8	4.0
24							G	2.8	3.4	3.7	4.0	4.0
25		2.2	1.7	1.8	1.8			G	3.8	3.8	4.0	4.0
26	1.7							3.4	3.4	3.7		4.0
27	1.9	2.2	1.7	1.8			G	3.0	3.4	3.6		G
28							2.4	2.9	G	G	4.2	4.4
29								G	3.5	G	4.6	4.1
30		2.4	2.1				G			B	G	4.2
Count	3	6	6	9	2	..	13	27	27	27	27	28
Median	..	2.1	1.7	1.8	..	..	G	3.0	3.4	3.8	4.0	4.2
Mean	..	2.1	1.8	1.7	..	..	2.3	3.0	3.5	3.8	4.0	4.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc

Month : June, 1960

TABLE 60 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
4.2	4.2	B	B	B	3.2				2.4			1
4.2	4.0	3.8	3.7	3.2								2
4.0	4.0	4.1	G	G	G							3
4.1	G	5.3	3.8	3.8	2.7			1.9	C	C	C	4
4.1	4.0	3.8	3.5	3.2	G			1.9	2.2	1.8		5
4.2	4.1	3.9	3.7	3.3	3.0	2.2		2.6	2.6	3.2		6
4.4	4.2	3.9	7.8	4.4	8.0	2.5						7
4.2	B	4.2	3.7	3.5	2.8							8
4.5	4.4	4.0	3.7	3.5	5.0	5.0	2.2		2.0	2.5		9
4.4	4.2	4.0	3.9	3.5								10
4.4	4.4	4.0	4.4	3.8	5.5	3.1						11
4.8	4.7	4.2	3.8	3.8	3.8	4.6	2.8	2.5	2.1	2.3		12
4.4	4.6	4.8	4.0	3.4	2.9	1.8	2.1				2.1	13
4.3	4.2	3.9	G	G			1.8	2.2				14
4.5	4.4	4.2	G	G								15
4.4	4.1	4.1	3.8	3.4	2.8				2.7	2.1		16
4.2	4.2	4.0	6.0	3.3	3.2	3.2	2.4	1.7		2.3		17
4.2	4.0	3.9	3.6	3.2	2.7			1.8	1.8			18
C	C	3.8	3.7	3.3	3.0			2.2	1.9	2.4		19
4.0	4.2	4.0	3.6	3.2	G	1.9						20
3.9	3.9	3.7	3.5	G	G				1.7	1.8		21
4.2	4.8	3.9	3.8	3.7	5.2	4.2	4.2				1.5	22
4.0	4.0	4.0	3.7		3.4	2.4						23
4.0	4.0	3.8	3.6	G	2.8		2.2				1.7	24
4.0	4.2	4.0	4.0	4.6	G					2.2		25
4.2	4.0	4.2	3.6	G	G				C	1.5		26
G		4.0	3.6	3.3		2.2				1.8	1.4	27
4.2	4.2	4.0	3.7	3.4	G							28
7.2	4.1	4.6	3.8	G	3.0							29
4.2	4.0	4.0	3.8	3.6	3.0	2.2						30
29	27	29	29	28	25	12	7	8	9	11	4	Count
4.2	4.2	4.0	3.7	3.3	2.9	2.4	2.2	2.0	2.1	2.2	..	Median
4.3	4.2	4.1	4.0	3.5	3.7	2.9	2.5	2.1	2.2	2.2	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc

Month : June, 1960

TABLE 60 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1			2.1					G	3.6	4.2	4.0	4.3
2	2.2	2.3	1.8	2.6	1.8			G	3.6	4.2	4.2	4.2
3								G	3.8	3.8	4.0	4.0
4							G	G	3.6	3.8	G	4.1
5								G	G	G	4.5	4.1
6		1.6					G	3.2	3.7	3.8	4.2	4.2
7							G	G	3.8	4.0	4.1	4.5
8							2.8	3.3	3.6	4.0	4.2	4.2
9							G	3.3	3.7	4.0	4.4	4.2
10							2.8	3.3	3.6	4.0	4.6	4.4
11	2.3						2.8	3.3	3.8	4.0	4.2	4.5
12							G	3.3	4.1	4.2	4.6	4.8
13				1.6			2.7	C	4.0	4.0	4.2	4.3
14	2.0						G	G	3.9	4.1	4.2	4.3
15							2.6	3.7	3.8	4.0	4.1	4.6
16				1.8			2.9	3.4	3.9	3.8	4.1	4.0
17							2.6	3.2	3.6	3.8	4.0	4.1
18	2.0	1.7					2.7	3.2	3.6	3.8	4.1	4.1
19						2.0	2.6	3.2	C	C	C	C
20				1.8		2.1		3.1	3.6	3.8	4.2	4.0
21							2.4	3.2	3.6	4.0	4.1	3.9
22			1.3				G	3.1	3.5	3.9	3.9	4.0
23								G		C	G	G
24	1.6						2.6	3.2	3.6	3.9	4.1	4.2
25	1.8	1.9	1.7	1.7			G	3.1	3.6	3.8	4.0	4.0
26								3.6	3.6	3.9	4.0	4.0
27	2.0	1.5					G	3.2	3.6	B		G
28							3.0	G	G	4.0	4.2	4.4
29								G	G	4.0	G	4.6
30	1.8	1.9	1.8				G	G	G	G	G	4.2

Count	8	6	5	5	1	2	22	29	28	27	28	29
Median	2.0	1.8	1.8	1.8	..	..	2.5	3.2	3.6	4.0	4.1	4.2
Mean	2.0	1.8	1.7	1.9	..	..	2.7	3.3	3.7	4.0	4.2	4.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc

Month : June, 1960

TABLE 60 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
4.1	4.2	B	B	B								1
4.2	4.0	3.9	3.5	3.3						1.6		2
4.2	4.0	G	G	G								3
4.0	C	4.4	3.9	3.1				2.0				4
4.1	3.9	3.7	3.4	3.0			1.8	2.2	1.8			5
4.1	4.0	3.9	3.5	3.1	2.4		1.7	2.6	2.4	2.8		6
4.5	4.0	3.9	4.2	8.2	5.0			1.7	1.4			7
4.4	4.2	4.1	3.6	G								8
4.2	4.1	4.0	3.6	4.7	5.0	2.3		2.2				9
4.2	4.1	3.9	3.6	3.2		2.3					1.9	10
4.3	4.2	4.0	3.8	5.2	4.2	2.5			1.9	1.9		11
4.4	4.4	4.1	3.7	3.8	3.5	3.2	2.7	2.5	2.0	2.5		12
4.3	4.4	4.3	3.7	3.2	2.5	2.0		1.8			1.6	13
4.2	4.0	3.8	G	G	3.0	2.7	2.1					14
C	4.3	3.8	G	G	2.5							15
4.2	4.0	4.0	3.6	3.2	2.5			2.0	2.5	2.2		16
4.0	4.0	5.0	4.4	3.2	2.8	3.0	1.9		3.0		1.8	17
4.2	4.0	G		3.0	2.3			2.0	1.9			18
C	4.0	3.8	3.8	3.3	2.4			2.6				19
4.0	3.9	3.8	3.4	G	2.5							20
4.1	4.0	3.8	3.5	G					1.6	1.6	1.8	21
4.4	4.0	3.8	3.7	4.4	4.4	4.0	3.0				1.8	22
4.4	4.1	3.8	3.7	3.2	3.2							23
4.1	4.0	3.8	4.0	3.2		2.8					2.6	24
4.2	4.0	4.0	4.0	3.0	2.6	1.8						25
4.0	3.9	4.0	3.5	G	2.6						1.9	26
4.4	3.9	4.0	3.6	3.2	2.5				1.3	1.7		27
4.4	4.0	3.8	3.6	3.1	2.5							28
4.2	4.1	4.0	G	3.4	2.6							29
4.2	4.1	3.9	3.6	3.3	2.6	1.5						30
28	29	29	28	29	21	11	6	10	10	7	7	Count
4.2	4.0	3.9	3.6	3.2	2.6	2.5	2.0	2.1	1.9	1.9	1.8	Median
4.2	4.1	4.0	3.7	3.6	3.0	2.6	2.2	2.2	2.0	2.0	1.9	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : fmin

Unit : Mc

Month : June, 1960

TABLE 61  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	C	1.6	1.5	1.7	C	2.0	2.3	2.4	2.4	2.8	3.0	3.1
2	1.7	1.6	1.4	1.4	1.3	1.9	2.2	2.5	2.3	2.5	2.7	2.8
3	1.3	1.3	1.2	1.5	1.4	1.5	2.2	2.0	2.2	2.9	2.7	3.0
4	1.5	1.7	2.0	1.5	1.5	1.3	2.2	2.2	2.1	2.4	2.7	3.0
5	C	C	C	C	C	C	C	C	2.5	3.1	2.5	2.8
6	1.4	1.5	1.5	1.5	1.5	1.7	2.2	1.7	2.0	2.5	2.8	2.9
7	2.2	2.2	3.0	1.6	1.4	1.7	2.3	1.6	2.8	2.8	2.8	3.0
8	1.7	2.0	1.6	1.6	1.3	1.8	2.2	1.8	2.3	2.6	3.1	3.2
9	2.1	1.7	1.7	1.6	1.7	1.7	2.4	2.2	2.5	2.6	3.4	3.6
10	1.7	1.9	1.6	1.7	2.2	2.0	2.4	2.0	2.2	2.4	2.8	4.2
11	1.3	1.6	1.7	1.6	1.8	1.7	2.3	1.9	2.3	2.6	2.8	3.2
12	2.0	1.5	1.4	1.6	1.6	1.7	1.9	1.8	2.1	2.4	3.0	4.6
13	1.9	1.8	1.6	1.6	1.7	1.7	2.5	2.0	2.5	2.8	2.7	3.0
14	1.6	1.4	1.4	1.5	1.5	2.1	1.7	1.7	2.5	2.6	2.9	3.3
15	1.7	2.1	1.3	1.8	1.5	1.6	2.4	1.8	4.5	2.5	2.7	2.9
16	1.2	1.4	1.2	1.7	1.9	1.7	1.8	1.7	2.6	2.6	2.7	2.6
17	2.0	2.1	1.9	1.3	1.9	1.5	1.8	1.7	2.0	2.3	2.4	2.6
18	1.6	1.2	1.4	1.6	1.4	1.7	1.8	1.7	2.2	2.7	2.5	2.8
19	1.4	1.4	1.5	1.1	1.2	1.4	1.9	1.7	C	C	C	C
20	2.5	2.2	1.4	1.7	2.0	1.7	1.5	1.7	2.1	2.5	2.6	2.7
21	1.2	1.1	1.1	1.2	1.4	1.6	2.2	1.6	1.9	2.4	2.6	2.7
22	1.8	1.3	1.3	E	1.3	1.6	2.2	1.6	2.1	2.3	2.5	2.4
23	1.7	1.9	1.5	1.6	1.7	1.5	2.2	1.7	2.4	C	2.2	2.5
24	1.4	1.2	1.4	1.7	1.4	1.3	1.6	1.6	1.9	2.2	2.4	2.6
25	1.8	1.7	1.3	1.1	1.4	1.8	2.2	1.4	2.0	2.2	2.4	2.5
26	1.5	1.4	1.7	1.1	1.4	1.4	2.0	1.7	1.8	2.2	4.5	2.8
27	1.3	E	1.6	1.5	1.6	1.4	1.4	1.7	2.2	2.4	4.6	4.4
28	1.1	1.6	1.4	1.5	E	E	1.6	1.8	3.0	2.6	2.6	2.8
29	1.5	1.1	1.1	1.5	1.3	1.5	2.2	3.3	2.4	2.8	2.5	2.8
30	1.1	1.1	E	1.8	1.3	1.6	1.8	1.9	2.4	4.6	3.0	3.1

Count	28	29	29	29	28	29	29	29	29	28	29	29
Median	1.6	1.6	1.4	1.6	1.4	1.7	2.2	1.7	2.3	2.6	2.7	2.9
Mean	1.6	1.6	1.5	1.5	1.5	1.6	2.0	1.9	2.4	2.6	2.8	3.0

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : June, 1960

TABLE 61 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
4.0	3.1	B	5.7	4.2	3.2	2.2	1.1	1.4	1.4	2.0	1.5	1
3.1	2.7	2.5	2.8	2.4	2.6	2.1	1.6	1.6	1.7	1.6	1.3	2
3.1	3.0	2.8	3.0	2.4	2.0	1.9	1.4	1.6	1.4	1.5	1.5	3
3.0	3.4	2.7	2.8	2.3	2.2	1.9	1.4	1.4	C	C	C	4
3.0	3.0	2.4	2.4	2.2	2.0	1.8	1.3	1.2	1.3	1.5	1.2	5
3.0	2.8	3.0	2.6	2.3	2.0	1.6	1.3	1.1	1.6	1.6	2.6	6
3.1	2.9	2.6	2.5	2.1	2.2	1.6	1.4	1.3	1.6	1.6	1.7	7
3.1	5.0	3.0	2.5	2.2	2.2	2.0	1.4	1.6	1.6	1.8	2.1	8
3.1	3.3	2.9	2.6	2.3	1.8	1.6	1.2	1.6	1.5	1.9	2.4	9
3.5	2.8	2.7	3.0	2.0	3.0	2.1	1.4	1.5	1.5	1.5	1.8	10
3.2	3.1	3.1	2.5	2.1	C	C	1.7	1.8	1.8	1.8	1.9	11
4.4	3.8	3.3	3.0	1.9	1.8	2.0	1.4	1.1	1.2	1.7	2.0	12
2.8	4.2	2.7	2.5	2.1	1.6	1.6	1.3	1.4	2.0	1.6	1.6	13
2.8	2.8	2.6	2.7	2.8	3.0	2.2	1.7	1.5	2.0	1.7	1.3	14
3.2	3.0	2.8	2.8	2.6	2.8	2.1	1.7	1.4	1.3	1.4	1.5	15
3.8	2.7	2.9	2.6	2.1	1.8	1.9	1.4	1.3	1.2	1.4	1.1	16
2.5	2.5	2.4	2.2	2.3	2.1	1.4	1.3	1.5	1.3	1.4	1.3	17
2.8	3.0	2.6	2.8	2.2	1.7	2.0	1.6	1.7	1.0	1.6	1.4	18
C	C	2.6	2.3	1.9	2.0	2.0	1.4	1.4	1.6	1.6	2.7	19
2.7	2.8	2.3	2.5	1.8	1.8	1.6	1.5	1.6	1.7	1.6	1.8	20
2.6	2.5	2.5	2.2	2.3	2.2	2.0	1.4	1.8	1.6	1.2	1.6	21
2.5	2.5	2.4	2.1	1.7	1.6	1.1	1.1	1.1	1.5	1.5	1.2	22
3.0	2.8	2.4	2.3	2.0	1.8	1.5	2.0	1.8	1.8	1.3	1.5	23
2.8	2.8	2.6	2.6	2.4	1.9	2.2	1.3	1.4	1.4	1.6	1.3	24
2.7	2.6	2.6	2.6	2.6	2.0	2.0	1.5	1.8	1.6	1.7	2.0	25
2.8	3.0	2.6	2.2	2.2	2.4	2.0	1.2	1.8	C	1.1	1.5	26
4.2	4.4	2.8	2.6	2.0	3.0	1.7	1.3	1.5	1.3	E	E	27
3.0	2.8	2.8	2.5	2.2	2.0	2.0	1.2	1.6	1.5	1.3	1.6	28
3.0	3.0	2.7	2.8	2.5	2.4	2.1	1.2	1.5	1.4	1.3	1.1	29
2.4	2.6	2.5	2.4	3.0	2.3	1.6	1.4	1.5	1.3	1.4	1.5	30
29	29	29	30	30	29	29	30	30	28	29	29	Count
3.0	2.9	2.6	2.6	2.2	2.0	2.0	1.4	1.5	1.5	1.6	1.5	Median
3.1	3.1	2.7	2.7	2.3	2.2	1.9	1.4	1.5	1.5	1.5	1.6	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : June 1960

TABLE 61 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	1.7	1.7	1.4	1.5	1.8	2.3	2.7	2.5	2.6	2.9	3.1	3.3
2	1.6	1.4	1.2	1.4	1.2	2.4	2.8	2.4	2.5	2.5	2.8	3.0
3	1.4	1.4	1.4	1.4	1.3	2.0	2.9	2.2	2.6	2.6	2.9	3.2
4	1.1	1.5	1.6	1.5	1.6	2.0	2.1	1.9	2.4	2.4	3.2	2.7
5	C	C	C	C	C	C	C	2.1	2.8	3.0	2.6	3.1
6	1.8	1.3	1.8	1.7	1.6	1.9	2.0	1.8	2.3	2.5	2.8	3.0
7	2.2	2.6	2.4	1.6	1.7	1.9	2.0	2.0	3.0	2.9	2.8	3.0
8	1.8	2.0	1.3	1.3	1.6	2.2	1.7	2.0	2.4	2.6	3.2	3.1
9	1.8	1.7	1.6	1.7	1.6	2.1	2.5	2.3	2.4	3.0	3.2	3.4
10	2.0	2.0	1.8	1.7	1.9	2.4	2.2	2.0	2.4	2.6	4.1	3.2
11	1.8	1.6	1.6	1.6	1.8	2.2	2.2	2.3	2.6	2.5	3.0	3.2
12	1.6	1.4	1.6	1.5	1.8	C	2.1	1.8	2.3	2.6	3.8	4.8
13	2.0	1.7	1.8	1.5	1.6	2.3	2.1	C	2.6	2.6	2.8	3.0
14	1.5	1.6	1.4	1.4	1.6	2.6	1.9	2.4	2.5	2.7	3.8	3.0
15	2.2	1.5	1.4	2.2	1.5	2.0	2.0	2.1	2.5	2.5	2.8	C
16	1.8	1.6	1.9	1.1	1.7	2.2	1.8	1.9	2.6	2.5	2.6	2.8
17	2.3	2.1	2.1	1.8	1.8	2.0	1.7	2.0	2.1	2.3	2.5	2.6
18	1.1	E	1.8	1.4	1.5	1.9	1.9	2.0	2.6	2.5	2.8	3.2
19	1.4	1.2	1.3	1.6	1.4	1.4	1.7	1.9	C	C	C	C
20	2.3	2.2	2.0	1.7	1.8	2.0	3.0	1.8	2.2	2.3	2.9	2.7
21	1.2	1.1	1.3	1.2	1.4	1.6	1.2	1.8	2.2	2.5	2.7	2.7
22	1.9	1.2	E	1.5	1.9	1.6	1.8	1.6	2.3	2.2	2.6	2.6
23	2.0	1.7	1.6	1.5	1.6	1.8	2.4	1.8	2.2	C	2.6	3.0
24	1.0	1.2	1.5	1.5	1.4	1.6	1.4	1.7	2.1	2.4	2.6	3.0
25	1.5	1.5	1.6	1.1	2.4	1.8	1.6	1.8	2.4	2.3	2.6	2.6
26	1.7	1.7	1.6	1.4	1.2	1.5	1.7	2.0	2.1	2.6	2.6	2.6
27	1.1	1.1	1.5	1.4	1.5	2.0	1.7	1.9	2.3	5.2	4.4	4.4
28	1.3	1.4	1.5	E	E	1.7	1.9	2.6	2.4	2.6	2.6	2.7
29	1.4	1.2	1.4	1.2	1.4	1.7	2.7	2.6	2.6	2.4	2.8	3.0
30	E	1.1	1.1	1.5	1.4	1.8	1.7	2.0	2.8	3.0	2.7	2.6

Count	29	29	29	29	29	28	29	29	29	28	29	28
Median	1.7	1.5	1.6	1.5	1.6	2.0	2.0	2.0	2.4	2.6	2.8	3.0
Mean	1.7	1.6	1.6	1.5	1.6	2.0	2.0	2.0	2.4	2.7	3.0	3.0

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : June, 1960

TABLE 61 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
3.4	3.3	7.6	4.8	4.0	2.7	1.5	1.4	1.6	2.1	1.9	1.6	1
2.9	2.6	3.0	2.7	2.3	2.1	1.7	1.7	1.5	1.4	1.4	1.5	2
3.1	3.0	3.0	2.8	2.2	1.6	1.6	1.5	1.5	1.5	1.5	1.4	3
3.0	C	2.5	2.6	2.2	2.3	1.5	1.5	1.3	C	C	C	4
2.8	2.8	2.5	2.3	2.0	2.3	1.7	1.2	1.1	1.4	1.5	1.0	5
3.0	2.8	2.7	2.4	2.2	1.7	1.6	1.1	1.0	1.7	1.7	2.4	6
3.0	2.9	2.6	2.3	2.2	1.8	1.8	1.3	1.6	1.1	2.0	1.8	7
3.2	3.1	2.7	2.6	2.2	2.5	1.4	1.7	1.6	1.7	1.7	2.0	8
3.2	3.0	3.0	2.6	2.1	1.4	1.3	1.7	1.4	1.8	2.5	2.3	9
3.0	3.0	2.5	2.2	1.6	2.6	2.0	1.3	1.3	1.3	1.6	1.9	10
3.2	3.1	3.2	2.4	2.2	1.6	1.3	2.1	1.6	1.3	1.6	2.2	11
4.1	3.2	3.2	2.6	1.6	2.1	2.3	1.2	1.4	1.2	1.4	1.9	12
3.0	2.8	2.5	2.3	1.8	1.3	E	1.4	E	2.1	1.7	1.5	13
2.6	2.7	2.8	2.7	2.9	1.8	1.5	1.4	2.2	1.9	1.5	1.5	14
C	2.8	2.7	2.5	2.6	2.2	1.7	1.6	2.0	1.9	1.2	1.2	15
2.7	2.9	3.0	2.3	2.2	1.9	1.4	1.3	1.3	1.1	1.2	1.0	16
2.5	2.5	2.4	2.4	2.3	1.9	1.5	1.2	1.5	1.1	1.1	1.3	17
2.9	2.7	2.6	2.3	2.1	1.4	1.7	1.5	2.0	1.3	1.5	1.6	18
C	2.6	2.4	2.2	2.2	1.7	1.6	1.6	1.6	1.7	1.8	2.4	19
2.8	2.5	2.5	2.2	1.9	1.6	1.5	1.6	1.3	1.4	1.2	1.4	20
2.6	2.7	2.4	2.4	2.4	2.3	1.4	1.4	1.6	1.2	1.4	1.5	21
2.4	2.5	2.3	1.9	1.7	1.5	U1.2s	1.2	1.5	1.6	1.5	1.3	22
2.8	2.6	2.5	2.2	2.0	1.6	2.1	2.0	1.8	1.7	1.3	1.4	23
2.6	2.4	3.0	2.4	2.1	2.2	1.8	1.4	1.5	1.8	1.9	1.4	24
2.8	2.6	2.4	3.4	2.3	2.2	1.3	1.5	1.7	1.5	1.5	1.6	25
2.7	2.6	3.0	3.0	3.4	2.2	1.5	1.6	1.5	1.2	1.4	1.2	26
3.4	3.0	2.6	2.4	2.4	2.0	1.5	1.3	1.2	1.2	E	1.2	27
2.7	2.8	2.6	2.4	2.2	1.8	1.5	1.5	1.4	1.5	1.3	1.0	28
3.0	3.2	2.8	2.4	2.2	2.0	1.4	1.5	1.5	1.5	1.3	1.5	29
2.6	2.6	2.6	2.4	2.6	1.9	1.3	1.5	1.5	1.3	1.8	1.1	30
28	29	30	30	30	30	30	30	30	29	29	29	Count
2.9	2.8	2.6	2.4	2.2	1.9	1.5	1.5	1.5	1.5	1.5	1.5	Median
2.9	2.8	2.8	2.5	2.3	1.9	1.6	1.5	1.5	1.5	1.6	1.6	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'f2  
Unit : Km  
Month : June, 1960

TABLE 62  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2' N  
Longitude : 77°5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	L	L
2								260	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5							C	C	L	L	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8							L	L	L	L	L	L
9								L	L	L	L	L
10							L	L	L	L	L	L
11								L	L	L	L	L
12								L	L	L <sub>H</sub>	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19							L	L	C	C	C	C
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26								L	L	L	L	L
27								L	L	L	L	L
28								260	L	L	L	L
29								L	L	L	L	L
30								L	300	280	L	L
Count								2	1	1		
Median												
Mean												

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'f2

Unit : Km

Month : June, 1960

TABLE 62 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	B	B	L	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L <sub>H</sub>							4
												5
L	L	L	L	L	A							6
L	L	L	L	L	L							7
L	L	L	L	L	L							8
L	L <sub>H</sub>	L	L	L	L							9
												10
L	L	L	L	L	A							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
												15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
C	C	L	L	L	L							19
L	L	L	L	L	L	L						20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
325	L	L	L <sub>H</sub>	L	L							25
												26
L	L	L	L	L	L							27
L	460	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
1	2	..	..	..	..	..						Count
..	..	..	..	..	..	..						Median
..	..	..	..	..	..	..						Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'f2

Unit : Km

Month : June, 1960

TABLE 62 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							L	L	L	L	L	L
2							L	L	L	L	L	L
3								L	L	L	L	L
4								280	L	L	L	L
5								L	L	L	L	L
6							L	L	L	L	L	L
7							L	L	L	L	L	L
8							L	L	L	L	L	L
9							L	L	L	L	L	L
10							L	L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14							L	L	L	L	L	L <sup>H</sup>
15								L	L	L	L	L
16							L	L	L	L	L	L
17							L	L	L	L	L	L
18							L	L	L	L	L	L
19							L	L	C	C	C	C
20							L	L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L <sup>H</sup>	L <sup>U300L</sup>
23								L	L	C	L	290
24								L	L	L	L	L
25								L	L	L	L	L
26							L	L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	300	L	L
Count							..	1	..	1	1	2
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km

Month : June, 1960

TABLE 62 (Contd.)

Ionospheric Data

75.0 E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	B	L	L								1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L <sub>H</sub>	L							4
												5
L	L	L	L	A	L							6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
												10
L	L	L	L	L								11
L	L	L	L	L								12
L	L	L	L	L								13
L	L	L	L	L								14
C	L	L	L	u350L								15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
C	L	L	L	L	L							19
L	L	L	L	L	L							20
u365L	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
u310L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
2	..	..	..	1	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : h'F  
Unit : Km  
Month : June, 1960

TABLE 63  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	C	280	320	320	315	295	260	245	235	210H	215	220H
2	245	255	300	340	340	300	260	240	220	220	200H	215
3	320	300	300	280	250	230	260	240	220	220	215	205
4	280	300F	365	435	400	270	260	240	220	220	205	200H
5	C	C	C	C	C	C	C	C	235	220	205	220
6	315	335	320	265	260	245	265	255	220H	225	215	215
7	270	275	300	280	270	230	260	240	235	230	215H	220
8	280	290	280	280	255	250	275	240	235	230H	220H	215
9	U340F	U280F	U265F	250F	230	235	265	245	235	215	230	215
10	255	270	310	340	305	260	275	240	235	215H	210H	235
11	280	300	300	280	260	245	270	240	230	220	210	200
12	F	400	380	U365F	330	245	265	240	240	210H	210	220
13	305	300	320	320	270	245	270	250	225H	240	205	205
14	350	390	420	370	300	260	270	245	235	220	215	200
15	240	260	320	F	F	400	280	240	B	200	200	195
16	250	285	350	U400F	365	270	275	245	225	215	215	215
17	310	290	290	270	240	230	260	235	225	220	210	205
18	280	320	300	245	225	260	260	240	210	210	200H	195
19	240	260	315	350	305	275	260	230	C	C	C	C
20	270	300	345	340	305	260	265	240	210	200	200	215
21	250	245	255	275	280	260	265	240	215	200	205	200H
22	320	390	F	F	F	270	260	230	210H	215	205	185
23	360F	320	280	260	240	240	250	240	205H	C	210	210H
24	340	320	290	260	230	240	260	230	230	210	220	205
25	310	290	355	420	380	240	260	240	230	220	220	200
26	420F	F	F	450F	260	240	260	U240A	230	220	B	200
27	330	340	300	300	280	260	260	240	225	220	B	B
28	U480F	F	F	F	E	E	260	235	240	220H	230	220
29	290	300	340	380	340	280	270	250	220	220	A	200H
30	300	340	380	295	240	240	240	240	220	B	220	220
Count	27	27	26	26	27	29	29	29	28	27	26	28
Median	300	300	310	310	280	260	260	240	225	220	210	210
Mean	305	305	320	320	290	260	265	240	225	215	210	210

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km

Month : June, 1960

TABLE 63 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
220	200H	B	B	B	270	290	340	335	295	260	245	1
200H	200H	205	215	230	255	270	335	F	F	400	340	2
205	200	220H	220	205H	250	280	320	F	F	320	300	3
205	220	A	240	270	260H	295	315	280	C	C	C	4
210H	220H	210	235	235	260	280	300	300	300	300	300	5
230	220H	220	230	230H	260	290	U370F	375	370F	350	300	6
215	215	200	A	A	A	290	340	U380F	370	325	280	7
210	B	230	235H	235	255	285	U360F	F	F	F	F	8
215	200H	220	235	250	A	A	360F	U400F	410	380	305	9
215H	220	220	230	240	255	280	340	U310F	U350F	325	300	10
220	225	220	U240A	U250A	A	290	340	F	F	F	F	11
B	230	220	230H	A	A	A	320	U345F	360	400	360	12
200	U230B	A	240	250	270	290	345	F	F	F	U305F	13
200	200	220	220	240	255	280	315	290	255	240	240	14
215	225	220	200H	235	260	285	320	340	320	290	265	15
215	190H	200	220	225	250	280	335	380	405	360	325	16
200	195	210	A	225	250	U280A	330	365	U380F	355	310	17
195	200	200H	215	215	235	260	280	290	285	260	225	18
C	C	220	220	220	260	275	305	325	285	265	260	19
220	220	210	205	215	245	260	285	300	340	320	290	20
195	195H	185H	215	230	245	260	265	300	315	300	300	21
200	A	220H	220	U250A	A	A	U360A	360F	F	440F	F	22
180H	200H	225	230	225	260	280	295	300	310F	320	340	23
205	200	200	185H	240	250	265	280	280	295	305	300	24
210	200	200	230	A	250	265	300	320F	400F	420F	400	25
200	195H	230	230	230	250	260	260	280	C	320	320	26
220	220	220	210	240	260	280	320	330	380F	400F	460F	27
205	200	220	225	220	250	275	320	280F	U300F	320	300	28
A	205	A	220	240	245	270	320	320	360F	315	300	29
220	200	200	220	240	260	280	350	U400F	U460F	U460F	U440F	30
27	27	26	27	26	25	27	30	25	22	26	26	Count
210	200	220	220	235	255	280	320	320	345	320	300	Median
210	210	215	225	235	255	280	320	325	345	335	310	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km

Month : June, 1960

TABLE 63 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	260	315	335	320	300	300	260	240	220	225	200 <sub>H</sub>	235
2	250	280	335	350	320	300	240	230	220	220	215	200
3	305	300	300	F	240	260	240	235	220	215	205	200
4	285	325	400	F	340	250	250	240	220	210	200	205
5	C	C	C	C	C	C	C	235	230	220 <sub>H</sub>	A	2 5 <sub>H</sub>
6	330	335	300	260	255	270	255	230	235	220	215	215
7	275	280	300	280	240	255	255	235	230	215	220	220 <sub>H</sub>
8	280	300	280	270	240	295	265	235	235	225	220 <sub>H</sub>	2 5 <sub>H</sub>
9	U320 <sub>F</sub>	U270 <sub>F</sub>	260	240	230	280	255	235	225	235	225	215 <sub>H</sub>
10	255	300	340	325	275	280	260	235	225	220 <sub>H</sub>	220	215 <sub>H</sub>
11	295	305	290	270	255	290	255	235	225	215	205	230
12	390	395	370	350	290	C	260	225 <sub>H</sub>	230	220	225	B
13	305	315	320	300	240	275	260	C	240	220	200	205 <sub>H</sub>
14	360	U400 <sub>F</sub>	395	345	265	295	250	235	230	220	220	200 <sub>H</sub>
15	250	290	F	F	F	295	260	240	220	200	200	C
16	265	300	F	F	310	290	260	240	230	210	205 <sub>H</sub>	205
17	300	300	280	250	230	255	250	230	225	215	200	200
18	300	315	280	225	235	295	245	230	210	205	205	200 <sub>H</sub>
19	240	285	335	340	290	290	240	220	C	C	C	C
20	280	315	360	325	270	290	260	230	205	205	220	215
21	245	245	270	280	270	260	250	220	215	205	210	190
22	360	440	F	F	F	265	240	235	215	205	200	190
23	340 <sub>F</sub>	300	270	245	240	245	250	225	200 <sub>H</sub>	C	200 <sub>H</sub>	200
24	340	300	270	260	230	275	245	230	220	205	210	200
25	285	310	400	400	300	265	235	230	220	210	210	200
26	F	F	F	360 <sub>F</sub>	240	270	250	A	220	215	200	200
27	340	300	310	280	280	280	260	230	220	B	B	225
28	520 <sub>F</sub>	F	F	E	E	300	260	235	220	200 <sub>H</sub>	200	210
29	300	320	360	360	305	300	260	240	220	215	200 <sub>H</sub>	A
30	310	360	360	240	240	265	260	240	235	220	220	220
Count	28	27	24	24	27	28	29	28	29	27	27	26
Median	300	300	315	290	265	280	255	235	220	215	205	205
Mean	305	315	320	300	265	280	255	235	225	215	210	210

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km

Month : June, 1960

TABLE 63 (Contd.)

Ionospheric Data

75.0°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
200	220	B	B	280	280	305	350	305	265	250	255	1
200H	200	215	220	240	260	280	F	F	F	F	320	2
200	200	220H	220	235	260	280	F	F	340	300	295	3
200H	C	A	250	255H	270	300	300	270	C	C	C	4
215H	220	220	235	240	270	300	300	300	300	300	310	5
220	230	230	235	250	275	320	U370F	380F	355F	330	280	6
225H	210H	225	A	A	A	300	370	U370F	350	300	275	7
210	240	235H	240	245	270	315	F	F	F	F	U355F	8
210	215	230	240	A	A	305	U400F	405	390	345	280	9
220H	220H	215	235	240	270	300	365	F	U345F	315	285	10
215	210	220	240	A	U300A	300	345	F	F	F	F	11
220	220	225	230	A	U280A	U295A	335	355F	370	385	330	12
200	220H	245H	240	255	275	300	U390F	F	F	320	330	13
195	195	220	220	235	275	300	F	260	260	240	235	14
C	240	200H	235	250	270	300	U345F	335	300	280	250	15
205H	205	200	200H	235	265	300	360	U395F	U380F	345	U300F	16
195	200H	A	A	235	260	U300A	350	365	U400F	340	290	17
200H	195H	200H	210	225	250	270	290	295	280	245	225	18
C	215	220	225	245	260	290	315	320	275	260	260	19
200H	200	210	220	235	255	270	295	315	335	315	260	20
195H	200	215	225	235	260	260	U290F	315	305	300	295	21
230	190	200H	225	A	A	A	365	F	U400F	390F	380	22
215	225	220	230	235	U275A	280	300	300	320	330	340	23
200	205	195	240	240	260	270	285	295	300	320	330	24
200	200	210	A	230	260	280	305	380F	420F	400	400F	25
195H	180H	230	220	240	250	260	280	280	280	320	320	26
220	220	220	240	240	260	280	340	350	U360F	440F	480F	27
200H	220	225	220	240	260	295	340F	320F	320	300	285	28
200	220	220	220	240	260	285	320	360F	320	300	300	29
210	200	210	230	245	260	295	U385F	U440F	U460F	U440F	460	30
28	29	27	26	25	27	29	26	23	25	26	28	Count
200	215	220	230	240	260	295	340	320	335	320	300	Median
205	210	220	230	240	265	290	335	335	335	325	310	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km

Month : June, 1960

TABLE 64  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								120	A	110	A	A
2								115	105	A	A	A
3								115	A	A	A	A
4								115	105	A	A	110
5							C	C	115	115	A	A
6								A	A	A	A	A
7								A	120	A	A	A
8								A	A	A	A	A
9								115	A	A	A	A
10								A	A	A	A	A
11								110	110	A	A	A
12							120	115	110	A	A	B
13								115	120	A	A	A
14							120	115	110	A	A	B
15								A	B	A	A	A
16								A	110	A	A	A
17							120	105	A	A	A	A
18							120	105	A	A	A	A
19							125	A	C	C	C	C
20							115	105	A	A	A	A
21								115	A	A	A	A
22								105	A	A	A	A
23								110	115	C	120	120
24							120	110	110	110	110	A
25								105	100	A	A	A
26								A	A	A	B	A
27							130	105	105	A	B	B
28							120	A	B	105	105	A
29								B	105	100	A	105
30							120	120	110	B	110	105

Count	10	19	15	5	4	4
Median	120	115	110	110	..	..
Mean	120	110	110	110	..	..

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km

Month : June, 1960

TABLE 64 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
B	A	B	B	B	A							1
A	A	A	A	A	A							2
A	A	A	120	110	120							3
A	115	A	A	A	A							4
A	A	A	A	A	120							5
A	A	A	A	A								6
A	A	A	A	A	A							7
A	B	A	115	115	115							8
A	A	A	A	115	A	A						9
A	A	115	A	A								10
A	A	120	A	A	A							11
B	B	A	A	A	A							12
A	B	A	A	A	A							13
A	A	A	115	120								14
A	A	A	115	115								15
B	A	110	A	A	120							16
A	A	A	A	A	A							17
A	A	A	A	A	105							18
C	C	A	A	A	A							19
A	A	A	A	A	115	140						20
A	A	A	A	120	120							21
110	A	A	A	A	A							22
A	A	120	115	115								23
A	A	A	A	115	A							24
A	A	A	A	A	120							25
A	A	A	A	105	120							26
B	B	A	A	A								27
A	A	A	110	115	120							28
A	105	115	110	115	120							29
A	A	105	105	A	120							30
1	2	6	8	11	12	1						Count
..	..	115	115	115	120							Median
..	..	115	115	115	120							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km

Month : June, 1960

TABLE 64 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								120	A	110	A	A
2								115	105	A	A	A
3								110	A	A	A	A
4							120	105	A	A	105	A
5								110	115	A	A	A
6							120	A	A	A	A	A
7							120	115	A	A	A	A
8							A	A	A	A	A	A
9							120	A	A	A	A	A
10							120	A	A	A	B	A
11								110	105	A	A	A
12							115	115	105	A	A	B
13							120	C	A	A	A	A
14							120	115	110	A	B	A
15							A	A	A	A	A	C
16							115	A	A	A	A	A
17							110	105	A	A	A	A
18							115	A	A	A	A	A
19							A	A	C	C	C	C
20							B	A	A	A	A	A
21								A	A	A	A	A
22							120	A	A	A	A	110
23								110	115	C	120	120
24							110	110	A	110	A	A
25							110	105	100	A	A	A
26							110	A	A	A	A	A
27							120	105	105	B	B	B
28							120	120	105	110	A	A
29								110	105	A	105	115
30							120	110	110	110	105	A

Count	18	17	11	5	4	3
Median	120	110	105	110	..	..
Mean	115	110	105	110	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km

Month : June, 1960

TABLE 64 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	B	B	B								1
A	A	A	A	A	125 <sub>H</sub>							2
A	A	115	120	115	120							3
A	C	A	A	A								4
A	A	A	A	115								5
A	A	A	A	A								6
A	A	A	A	A								7
120	115	110	A	120								8
A	A	115	120	A	A							9
A	A	115	A	A								10
A	A	A	A	A								11
B	A	A	A	A	A							12
A	A	Q	A	A								13
A	A	A	115	120								14
C	A	A	115	125								15
A	A	110	A	110	120							16
A	A	A	A	A								17
A	A	110	105	105	A							18
C	A	A	A	120	125							19
A	A	A	A	115	120							20
A	A	A	A	120								21
A	A	A	A	A								22
A	A	115	110	120								23
A	A	A	120	A								24
A	A	A	B	A								25
A	A	A	120	B								26
A	A	120	A	A								27
A	A	105	A	120								28
A	120	A	110	120								29
A	A	A	105	A								30

1	2	9	10	13	5	Count
..	..	115	115	120	120	Median
..	..	115	115	115	120	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : h'Es

Unit : Km

Month : June, 1960

TABLE 65  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	C		130	120				G	110	105	100	100
2		105	120	110	105			G	G	100	100	100
3		120						G	100	100	100	100
4								G	100	100	100	115
5	C	C	C	C	C	C	C	C	G	G	100	100
6			105	100				110	100	100	100	100
7								105	G	100	100	100
8		120					120	105	100	100	100	100
9								105	100	100	100	100
10								105	100	100	100	100
11								100	100	100	100	100
12							G	G	100	100	100	100
13				120			160	115	120	110	100	100
14	120						G	G	G	100	100	100
15	100						G	100	100	100	100	100
16							120	105	100	100	100	100
17				90			G	100	100	100	100	100
18		90	90				110	100	100	100	100	100
19	100			105			G	100	C	C	C	C
20				120			110	100	100	100	100	100
21					110			G	100	100	100	100
22	140			120				110	100	100	100	100
23								120	G	C	100	100
24	120						G	100	100	100	100	100
25	120	115	115	110	110			G	140	100	100	100
26	100							100	100	100	100	100
27	120	120	120	120			G	100	100	100	100	G
28	140						140	105	G	G	100	100
29	140							G	100	G	100	100
30		100	100				G	130	130	B	G	140

Count	10	7	7	10	3	..	6	20	23	24	28	28
Median	120	115	115	115	..	..	120	105	100	100	100	100
Mean	120	110	110	110	..	..	125	105	105	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : June 1960

TABLE 65 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
100	100	B	B	B	110				105			1
100	100	100	100	100						135		2
100	100	100	G	G	G							3
100	G	110	100	100	110			120	C	C	C	4
100	100	100	100	100	G			100	100	100		5
100	100	100	100	100	115	115	125	110	105	115		6
100	100	100	100	100	100	115						7
100	B	100	100	100	110							8
100	100	100	105	110	100	100	105		125	115		9
100	100	100	100	100								10
100	100	100	100	100	100	100						11
100	100	100	100	100	100	100	100	100	100	100		12
100	100	100	100	100	100	135	110	100			120	13
100	100	100	G	G			100	115				14
100	100	100	G	G	140							15
100	100	100	100	100	105				100	95	95	16
100	100	100	100	100	100	100	100	95	95	100	95	17
100	100	100	100	100	100			100	90			18
C	C	100	100	100	120	120		125	110	100		19
100	100	100	100	100	G	120						20
100	100	100	100	G	G				130	125	135	21
100	100	100	100	100	100	100	100	100			120	22
105	100	100	100	120	100	100						23
100	100	100	100	G	100		125			120	110	24
100	100	100	100	110	G					100		25
100	100	100	100	G	G				C	120		26
G	100	100	100	100		120				120	120	27
100	100	100	105	100	G				140	125	120	28
100	100	120	100	G	140							29
100	100	100	100	100	105	130					120	30
28	27	29	26	22	19	13	8	9	11	14	9	Count
100	100	100	100	100	100	115	100	100	105	115	120	Median
100	100	100	100	100	110	110	110	105	110	110	115	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : June, 1960

TABLE 65 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1			115					G	100	100	100	100
2	110	110	115	110	105			G	105	100	100	100
3								G	100	100	100	100
4							G	G	100	100	G	100
5								G	G	G	100	100
6		105					G	105	100	100	100	100
7							G	G	100	100	100	100
8		120					115	100	100	100	100	100
9							G	100	100	100	100	100
10							115	105	100	100	100	100
11	120						105	100	100	100	100	100
12							G	100	100	100	100	100
13				115			115	C	115	100	100	100
14	125						G	G	100	100	100	100
15							100	100	100	100	100	100
16				120			120	100	100	100	100	100
17							105	100	100	100	100	100
18	90	90					100	100	100	100	100	100
19			140	105		100	100	100	C	C	C	C
20				130		120	105	100	100	100	100	100
21							120	110	100	100	100	100
22			125				G	100	100	100	100	100
23								G	100	C	G	G
24		120					110	100	100	100	100	100
25	120	115	120	110			G	100	120	100	100	100
26							150	100	100	100	100	100
27	120	120					G	100	100	B	100	G
28							120	G	G	100	100	100
29	120							G	G	100	G	130
30	100	100	100				G	G	G	G	G	100
Count	8	8	6	6	1	2	14	18	25	25	25	27
Median	120	110	120	110	..	..	110	100	100	100	100	100
Mean	115	110	120	115	..	..	115	100	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : June, 1960

TABLE 65 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
100	100	B	B	B							115	1
100	100	100	100	100	G				120	115		2
100	100	G	G	G								3
100	C	100	100	100				110				4
100	100	100	100	105			100	100	100			5
100	100	100	100	115	115		115	105	120	115		6
100	100	100	100	100	105			130	120			7
100	100	100	100	G								8
100	100	100	105	100	100	105		120	120			9
100	100	100	100	100		135					115	10
100	100	100	100	100	100	100			135	130	130	11
100	100	100	100	100	100	100	100	100	100	100		12
100	100	100	100	100	100	100		100			115	13
100	100	100	G	G	120	120	120					14
C	100	100	G	G	135							15
100	100	100	100	100	110			100	100	95	90	16
100	100	100	100	115	100	100	100	100	100	90	90	17
100	100	G	100	100	100			100	90			18
C	100	100	100	125	120			120	110			19
100	100	100	100	G	140	100						20
100	100	100	100	G					130	120	130	21
100	100	100	100	100	100	100	100			130	120	22
100	100	100	100	140	100							23
100	100	100	100	105	140	100		125			110	24
100	100	100	120	110	135	100						25
100	100	100	100	G	140							26
100	100	100	100	100	120	120			120	120	120	27
100	100	100	100	105	120					135	120	28
100	130	100	G	140	120			120				29
100	100	100	100	120	110	125						30
28	29	27	25	22	22	13	6	13	13	10	12	Count
100	100	100	100	100	110	100	100	105	120	120	120	Median
100	100	100	100	110	115	110	105	110	115	115	115	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M3000)F2

Unit : . . . . .

Month : June, 1960

TABLE 66  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	C	2.70	2.65	2.65	2.70	2.80	2.75	2.85	2.70	2.45 <sub>H</sub>	2.20	2.15
2	3.00	2.95	2.65	2.50	2.60	2.75	2.75	3.00	2.90	2.75	2.50	2.15
3	F	F	F	F	F	U3.10 <sub>F</sub>	3.10	3.00	2.80	2.45	2.15	2.25
4	2.85	2.75	2.55	2.30 <sub>F</sub>	F	2.95 <sub>F</sub>	3.25	3.05	2.85	2.45	2.10 <sub>H</sub>	2.50
5	C	C	C	C	C	C	C	C	2.95	2.80	2.55	2.45
6	2.55	2.50	2.55	2.75	2.85	3.10	3.10	2.85	2.60	2.30	2.30	2.35
7	2.75	2.85	2.75	2.75	2.85	3.25	3.10	2.85	2.70	2.50	2.20	2.20
8	2.80	2.70	2.65	2.65	2.95	2.95	2.55 <sub>H</sub>	2.75	2.30	2.30	2.30	2.35
9	F	F	F	2.85	3.25	3.20	2.90	2.95	2.60	2.15	2.30	2.20
10	3.10 <sub>H</sub>	2.80	2.45	2.45	2.60	2.90	2.80	2.50	2.40	2.20	2.25	2.20
11	2.70	2.60	2.75	2.80	2.90 <sub>F</sub>	U3.00 <sub>F</sub>	2.70	2.60	2.45	2.35	2.20	2.20
12	F	F	F	F	F	F	3.05	C	2.80	2.40	2.00 <sub>H</sub>	2.20
13	2.60 <sub>F</sub>	2.70	2.65	2.70	2.90	3.20	3.00	2.90	2.80	2.55	2.25	2.20
14	2.50	F	F	F	F	2.85	2.80	3.00	2.70	U2.55 <sub>R</sub>	2.20	2.25
15	U3.15 <sub>S</sub>	3.15	2.85	F	F	F	3.00	3.00	2.70	2.55	2.20	2.30
16	2.90	2.80	2.55	F	2.45 <sub>F</sub>	F	2.60 <sub>F</sub>	2.55	2.45	2.30	2.20	2.20
17	F	F	F	F	3.10	3.15	3.00	2.75	2.60	2.30	2.15	2.35
18	F	2.55	2.80	3.20	3.30	2.95	2.85	2.75	2.50	2.30	2.30	2.20
19	3.10	2.85	2.50	2.30	2.50	2.95	2.60 <sub>H</sub>	2.70	C	C	C	C
20	2.95	2.70	2.55	2.55	2.80	3.00	2.70	2.60	2.40	2.30	2.40	2.30
21	2.95	2.95	2.90	2.55	2.75	3.00	3.15	3.10	2.80	2.55	2.20	2.25
22	2.65	2.40	F	F	F	3.00 <sub>H</sub>	3.25	3.15	2.95	2.75	2.50	2.30
23	F	F	F	F	F	F	U3.15 <sub>F</sub>	3.05	2.90	C	2.65	2.45
24	2.55	2.65	2.70	3.05	3.25	3.50	3.05	2.80	2.70	2.50	2.40	2.30
25	2.80 <sub>F</sub>	2.85 <sub>F</sub>	2.65	2.50	2.60 <sub>F</sub>	2.80 <sub>H</sub>	3.10	3.00	3.00	2.80	2.45	2.15
26	F	F	F	F	U3.20 <sub>F</sub>	3.10	3.15	3.10	2.80	2.50	2.20	2.30
27	2.80	2.90	3.00	3.00	3.10	3.05	2.90	2.90	2.30	2.70	2.50	2.50
28	F	F	F	F	E	E	2.95	3.20	3.00	2.75	2.55	2.30
29	U2.80 <sub>S</sub>	2.80	U2.60 <sub>S</sub>	2.45	2.60	2.85	2.70	3.00	2.80	2.70	2.40	2.30
30	2.80	2.70	2.50	2.80	3.15	3.20	3.30	3.20	3.20	3.00	2.85	2.70

Count	20	21	20	19	21	24	29	28	29	28	29	29
Median	2.80	2.75	2.65	2.65	2.85	3.00	3.00	2.90	2.70	2.50	2.30	2.30
Mean	2.80	2.75	2.65	2.65	2.90	3.00	2.95	2.90	2.70	2.50	2.30	2.30

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M3000) F2

Unit : ....

Month : June, 1960

TABLE 66 (Contd.)

Ionospheric Data

75° 0'E Mean Time

Latitude : 10° 2'N

Longitude : 77° 5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
2.15	2.20	B	2.30	2.30	U2.35s	2.25	2.15	2.20	2.40	2.60	2.85	1
2.20	2.20	2.20	2.20	2.35	2.50	2.70	2.50	F	F	F	F	2
2.25	2.35	2.30	2.55	2.65	2.70	2.70	2.50	2.45F	2.50F	F	U2.60F	3
2.35	2.35	2.45	2.35	2.30	2.05H	U2.10s	2.35	2.45	C	C	C	4
2.20	2.05	2.15	2.15	2.15	2.20	2.30	2.40	2.45	2.50	2.50	2.50	5
2.25	2.15	2.15	2.20	2.35	2.30	2.25	2.15	2.10	2.25F	2.45	2.65	6
2.10	2.20	2.20	2.25	2.30	2.40	2.50	2.35	2.20	2.35	2.45	2.65	7
2.30	2.30	2.30	2.30	2.20	2.20	2.15	2.00	F	F	F	F	8
2.20	2.15	2.15	2.20	2.25	2.40	2.45	2.35	2.20	2.30	2.40	2.65	9
2.20	2.20	2.20	2.30	2.40	2.55	2.60	2.50	2.45F	U2.45F	2.50	2.70	10
2.15	2.20	2.30	2.40	2.40	2.45	2.60	2.55	2.45	F	F	F	11
2.20	2.25	2.35	2.30	2.35	2.45	2.60	2.40	2.50	2.50	2.55	F	12
2.15	2.20	2.20	2.20	2.30	2.30	2.45	2.45	F	F	F	Fs	13
2.25	2.25	2.30	2.40	2.40	2.55	2.65	2.70	2.60	2.70	2.90	3.05	14
2.15	2.20	2.25	2.40	2.55	2.65	2.65	2.60	2.50	2.60	2.65	2.80	15
2.25	2.25	2.30	2.30	2.20	2.15	2.10	2.15	U2.05s	F	F	F	16
2.20	2.20	2.20	2.40	2.50	2.55	2.55	2.50	2.40	F	2.50	U2.70F	17
2.30	2.30	2.30	2.30	2.45	2.45	2.55	2.60	2.50	2.65	2.90	3.20	18
C	C	2.25	2.30	2.30	2.40	2.50	2.50	2.50	2.65	2.70	3.00	19
2.35	2.30	2.30	2.40	2.45	2.55	2.60	2.55	2.50	2.50	2.65	2.80	20
2.20	2.25	2.25	2.40	2.55	2.65	2.90	2.75	U2.60s	2.60	U2.70s	U2.65s	21
2.20	2.30	2.20	2.30	2.30	2.30	2.50	2.45	U2.40F	F	F	F	22
2.35	2.35	2.30	2.25	2.30	2.50	2.60	2.55	2.65	2.65	2.50	U2.55s	23
2.15	2.20	2.30	2.35	2.45	2.60	U2.90s	2.85	2.80	U2.70s	S	2.65	24
2.35	2.40	2.40	2.30	2.45	2.60	2.70	2.60	F	F	F	F	25
2.35	2.40	2.35	2.65	2.70	2.90	3.00	2.85	U2.70s	G	2.50	2.70	26
2.55	2.50	2.40	2.40	2.40	2.50	2.60	2.55	2.45	F	F	F	27
2.20	2.20	2.25	2.30	2.30	2.40	2.50	U2.50s	U2.40F	2.50	2.60	2.75	28
2.35	2.30	2.35	2.35	2.45	2.60	2.65	U2.55s	F	F	U2.60F	U2.80s	29
2.50	2.35	2.10	2.25	2.35	2.30	2.40	2.25	U2.20s	F	F	F	30
29	29	29	30	30	30	30	30	25	17	18	19	Count
2.20	2.25	2.25	2.30	2.35	2.45	2.60	2.50	2.45	2.50	2.60	2.70	Median
2.25	2.25	2.25	2.30	2.40	2.45	2.55	2.50	2.40	2.50	2.60	2.75	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds

Characteristic : (M3000)F2

TABLE 66 (Contd.)

Latitude : 10°2'N

Unit : .....

Ionospheric Data

Longitude : 77°5'E

Month : June, 1960

75°0'E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	2.95	2.65	2.65	2.70	2.70	2.80	2.80	2.85	2.55 <sup>H</sup>	2.35 <sup>H</sup>	2.15	2.15
2	3.05	2.80	2.60	2.55	2.70	2.75	2.90	3.00	2.90	2.60	2.30	2.15
3	F	F	F	F	F	3.10	3.05	2.90	2.65	2.25	2.25	2.25
4	2.85	2.60	2.40 <sup>F</sup>	F	F	3.25	3.15	3.00	2.65	2.25 <sup>H</sup>	2.30	2.40
5	C	C	C	C	C	C	C	2.95	2.95	2.70	2.50	2.35
6	2.55	2.50	2.65	2.85	3.05	3.00	3.05	2.75	2.45	2.25	2.35	2.25
7	2.80	2.80	2.65	2.90	2.90	3.00 <sup>H</sup>	3.05	2.75	2.55	2.35	2.15	2.10
8	2.70	2.75	2.65	2.85	2.95	2.80	2.70	2.45	2.35	2.25	2.40	2.35
9	F	F	U2.90 <sup>F</sup>	3.05	3.40	2.85	2.90	2.80	2.40	2.00 <sup>H</sup>	2.25	2.20
10	2.95	2.60	2.40	2.50	2.70	2.95	2.70	2.50	2.30	2.25	2.30	2.20
11	2.70	2.65	2.80	2.80	U2.80 <sup>F</sup>	2.90	2.60 <sup>H</sup>	2.45	2.40	2.30	2.15	2.15
12	F	F	F	F	F	F	3.00	2.95	2.65	C	2.10	2.15
13	2.65	2.60	2.65	2.80	3.15	3.05	3.00	C	2.65	2.40	2.20	2.15
14	U2.50 <sup>s</sup>	F	U2.65 <sup>F</sup>	F	F	3.00	2.90	2.80	U2.60 <sup>R</sup>	2.35	2.20	2.15
15	3.10	3.05	F	F	F	2.80	2.95	2.80	2.60	2.40	2.25	2.20
16	2.90	2.65	F	F	2.60	U2.80 <sup>F</sup>	2.50	2.50	2.45	2.20	2.20	2.20
17	F	F	F	2.95	3.10	3.00	2.90	2.70	2.45	2.20	2.20	2.30
18	U2.65 <sup>F</sup>	2.65	2.90	3.35	3.30	2.70	2.85	2.60	2.40	2.25	2.25	2.30
19	3.10	2.75	2.40	2.50	2.60	2.80	2.90	2.60	C	C	C	C
20	2.80	2.65	2.55	2.65	2.95	2.90	2.70	2.50	2.40	2.35	2.30	2.30
21	3.00	2.95	2.80	2.70	2.75	3.05	3.20	2.95	2.65	2.35	2.15	2.20
22	2.55	U2.25 <sup>F</sup>	F	F	F	3.15	3.20	3.10	2.80	2.65	2.35	2.15
23	F	F	F	F	F	F	3.10	3.05	2.90	C	2.60	2.45
24	2.60	2.60	2.80	3.10	3.50	2.95	2.90	2.80	2.60	2.40	2.40	2.25
25	2.80 <sup>F</sup>	2.80	2.50	2.40	F	3.00	3.10	3.00	2.90	2.65	2.25	2.30
26	F	F	F	F	3.45	3.10	3.20	2.90	2.70	2.40	2.20	2.30
27	2.80	2.90	2.95	3.10	3.05	2.95	2.95	2.70	2.45	2.55	2.50	2.60
28	F	F	F	E	E	2.85	3.15	3.10	2.80	U2.60 <sup>R</sup>	2.45	2.20
29	2.80	2.70	U2.50 <sup>s</sup>	2.45	2.80	2.85	3.00	2.90	2.75	2.55	2.30	2.35
30	2.70	2.60	2.65	3.20	3.10	3.00	3.30	3.30	3.00	3.00	2.75	2.60
Count	22	21	20	19	20	27	29	29	29	27	29	29
Median	2.80	2.65	2.65	2.80	2.95	2.95	2.95	2.80	2.60	2.35	2.25	2.25
Mean	2.80	2.70	2.65	2.80	3.00	2.95	2.95	2.80	2.60	2.40	2.30	2.25

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M3000) F2

Unit : . . . .

Month : June, 1960

TABLE 66 (Contd.)

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.20	2.20	2.30	2.30	2.30	U2.20s	U2.15Fs	2.25	2.30	2.50	2.75	2.95	1
2.25	2.25	2.20	2.30	2.40	2.60	2.65	2.40	F	F	F	F	2
2.35	2.25	2.45	2.60	2.70	2.65	2.60	2.45F	2.50F	U2.55F	F	2.80F	3
2.30	2.40	2.40	2.30	2.10	U2.00RH	2.35	2.40	2.55	C	C	C	4
2.00	2.15	2.15	2.15	2.20	2.25	2.35	2.40	2.50	2.50	2.45	2.55	5
2.20	2.10	2.15	2.25	2.30	2.25	2.15	2.10	U2.30F	2.35	2.45	2.70	6
2.10	2.15	2.20	2.20	2.35	2.40	2.45	2.25	2.30	2.40	2.55	2.70	7
2.30	2.30	2.30	2.25	2.20	2.15	U2.15s	2.00F	F	F	F	F	8
2.15	2.10	2.15	2.20	2.30	2.45	2.40	2.20	2.25	2.30	2.50	2.80	9
2.15	2.20	2.25	2.35	2.45	2.60H	2.55	2.50	U2.50F	2.50F	2.55	2.65	10
2.20	2.20	2.30	2.40	2.40	2.55	2.60	U2.45s	U2.35F	F	F	F	11
2.25	2.30	C	2.30	2.40	2.55	2.75	2.55	2.40	2.40	2.65	2.60	12
2.20	2.20	2.25	2.25	2.30	2.35	2.40	2.35	F	F	U2.65s	F	13
2.30	2.30	2.35	2.30	2.55	2.60	2.60	2.60	2.75	2.80	3.05	3.20	14
C	2.30	2.40	2.50	2.70	2.60	2.65	2.55	2.50	2.65	2.80	2.90	15
2.25	2.20	2.25	2.20	2.20	2.15	2.25	U2.10F	F	F	F	F	16
2.20	2.20	2.30	2.45	2.50	2.55	2.50	2.45	2.45	2.35	2.55	U2.75F	17
2.25	2.30	2.30	2.35	2.45	2.50	2.60	2.55	2.60	2.75	3.15	3.05	18
C	2.15	2.25	2.35	2.45	2.50	2.50	2.45	2.55	2.75	2.85	2.95	19
2.30	2.30	2.30	2.40	2.50	2.60	2.60	2.55	2.50	2.55	2.70	2.80	20
2.25	2.25	2.35	2.50	2.55	2.75	2.90	2.75	2.60	U2.65s	U2.70s	2.60	21
2.25	2.20	2.20	2.25	2.40	2.45	2.50	2.45	F	F	F	F	22
2.30	2.30	2.25	2.25	2.40	2.55	2.65	2.60	2.60	2.60	2.45	2.55	23
2.25	2.30	2.30	2.45	2.55	2.80	2.80	2.85	2.75	2.70	F	U2.70s	24
2.40	2.30	2.35	2.40	2.45	2.75	2.70	2.55	F	F	F	F	25
2.40	2.30	2.50	2.60	2.80	3.00	U3.00s	U2.80s	2.70	2.50	2.60	U2.75s	26
2.50	2.50	2.40	2.35	2.40	2.55	2.60	2.50	2.45	F	F	F	27
2.20	2.20	2.30	2.30	2.30	2.45	U2.50s	2.45	U2.50s	U2.50s	2.65	2.75	28
2.30	2.30	2.40	2.40	12.55R	2.60	U2.65s	2.45	F	F	U2.70s	2.80	29
2.40	2.20	2.10	2.30	2.30	2.40	2.35	2.30	2.20	F	F	F	30
28	30	29	30	30	30	30	30	23	19	19	20	Count
2.25	2.25	2.30	2.30	2.40	2.55	2.60	2.45	2.50	2.50	2.65	2.75	Median
2.25	2.25	2.30	2.35	2.40	2.50	2.55	2.45	2.50	2.55	2.65	2.80	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



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# Kodaikanal Observatory

BULLETIN NO. CLXII

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## A STUDY OF SOME OPTICAL PHENOMENA ASSOCIATED WITH SOLAR FLARES

BY

A. BHATNAGAR AND L. M. PUNETHA

### Abstract

Sequences of H $\alpha$  spectroheliograms covering nine solar flares have been examined for flare associated optical phenomena. A detailed description is given of the diversity of changes that take place in the flare region during its outburst and decay. "Disparition brusques" are common features during flare occurrence and the paper contains instances of these phenomena. However, not every flare regardless of its importance, necessarily produces a 'disparition brusque'. A case of sudden disappearance of a dark filament observed in the flare sequence of February 22, 1926 suggests that Doppler displacement caused by a motion of the filament is the cause of its disappearance from the normal H $\alpha$  spectroheliogram. The incidence of flares both with respect to the spot lifetime and its spatial form have been discussed.

### Introduction

Numerous phenomena of interest in solar physics are known to be closely associated with solar flares of different intensity. Among the important ones are, the changes in H $\alpha$  striation pattern, 'disparition brusque' and the ejection of bright or dark surges from flares. The development of the flare itself is of much interest. In some cases flares appear, as long ribbon-like bright filaments and in other cases as irregular patchy structures. The shape and the formation of flare filaments have a close correlation with the orientation of the spot group around which they flare up. Recently Ellison, McKenna and Reid (1961) have noted that the H $\alpha$  striation pattern around the active flare region, lose their contrast during the flash phase of the flare. Smith and Booton (1961) and also Bappu, Bhatnagar and Punetha (1962) have confirmed, that such an obscuration of H $\alpha$  striation pattern is associated with 'superflares' of importance 3+.

In the present paper, we have investigated some of the above phenomena associated with solar flares observed at Kodaikanal.

### The observational data

From the 52 year collection of H $\alpha$  spectroheliograms we selected nine flares of different importance. The basis for the selection of spectroheliograms is the availability of a proper sequence of photographs taken under good seeing conditions and covering the total duration of the flare,

The solar image diameter of 60 mm and the narrow pass band (0.3 Å) of the spectroheliograph offer an additional advantage over the conventional H $\alpha$  filtergram, for picking out fine details on the solar disk. The flare spectroheliograms were enlarged without loss of the fine details to yield a final image scale of 13 seconds of arc per mm. A comparison of the prints with the original plates indicated no loss of detail due to the enlargement. The accompanying drawing show important stages of the flare development. The dark filled region indicates the flare, the dotted portion represents the H $\alpha$  plage region and the hatched region signifies the dark markings (prominence seen against the disk). In the following section we give a brief summary of important changes of various features around the active region during the flare. The Greenwich spot number, the Mount Wilson classification of the spot group which gave rise to the flare, position angle, heliographic coordinates and the importance class are also given for each flare.

### Summary of flare development sequence

(i) *February 22, 1926.*—Greenwich spot group No. 9881 and 9882. Mount Wilson classification and changed to  $\alpha$  type. Importance Class 3 $\frac{1}{2}$ . Coordinates: 23°N, 9°W; P.A. 32°.

This flare had been well studied by Royds (1926) and by Ellison (1949) and recently by Bappu et al. (1962) and is well-known for its large area and intensity of H $\alpha$  radiation.

The flare developed into a double parallel bright ribbon structure, running between the two spot groups (Gr. No. 9881, 9882), but nearer to spot group No. 9881. This group was in a mature stage of development and was on its fourth round. According to the Mount Wilson magnetic classification this spot group was classed as complex type on 21 February and on 22 February as an unipolar  $\alpha$  type. It seems that at an epoch subsequent to the occurrence of the 'superflare', the complex nature of spot group 9881 changed to an unipolar group. Spot group 9882 experienced a similar change to the  $\beta$ p type from the  $\alpha$ p aspect that it displayed on earlier days.

Three regions a, b and c (Figure 1) brightened up separately but later joined to form the double ribbon like structure. During the maximum phase of the flare, ribbon 'b' ran right over the large spot umbra and completely covered it. The decline of the flare was slow, and thus the flare had a total duration of about 270 minutes.

A newly formed dark filament 'A' showed remarkable changes in shape and during the rising phase it vanished completely. A photograph taken at 0306 U.T. with the second slit centred on the red-wing of the H $\alpha$  line showed the appearance of the same dark filament, though with a slight change in shape. A similar plate taken on the red-wing of the H $\alpha$  line at 0926, after the flare was over, shows that the filament A, which appeared on 0306 plate does not exist on this plate, while a plate taken earlier with the second slit centred on the H $\alpha$  line at 0917 shows the presence of this filament A. We believe that the presence of the filament on the off-H $\alpha$  spectroheliogram taken during the flare phase indicates a bodily movement of the filament so as to exhibit a component of velocity in the direction away from the observer. A portion of the dark filament B also vanished during the rise to flare maximum, but was restored, to more or less its original shape. The recovery of the filament was in segments, a complete restoration being brought about when all the segments were linked together to form the original filament.

A third filament C, lying SE of the active region, also disappeared just around the maximum phase, though this filament was distant from the active region. A bright surge D ejected out just before the maximum, alongside the filament A and towards the filament B.

The zone of indistinctness of striation pattern (the obscured region) Flaround the flare region shows expansion and contraction in area, with flare rise and decline, as has been reported elsewhere (Bappu et al. 1962).

# THE FLARE OF FEBRUARY 22, 1926.

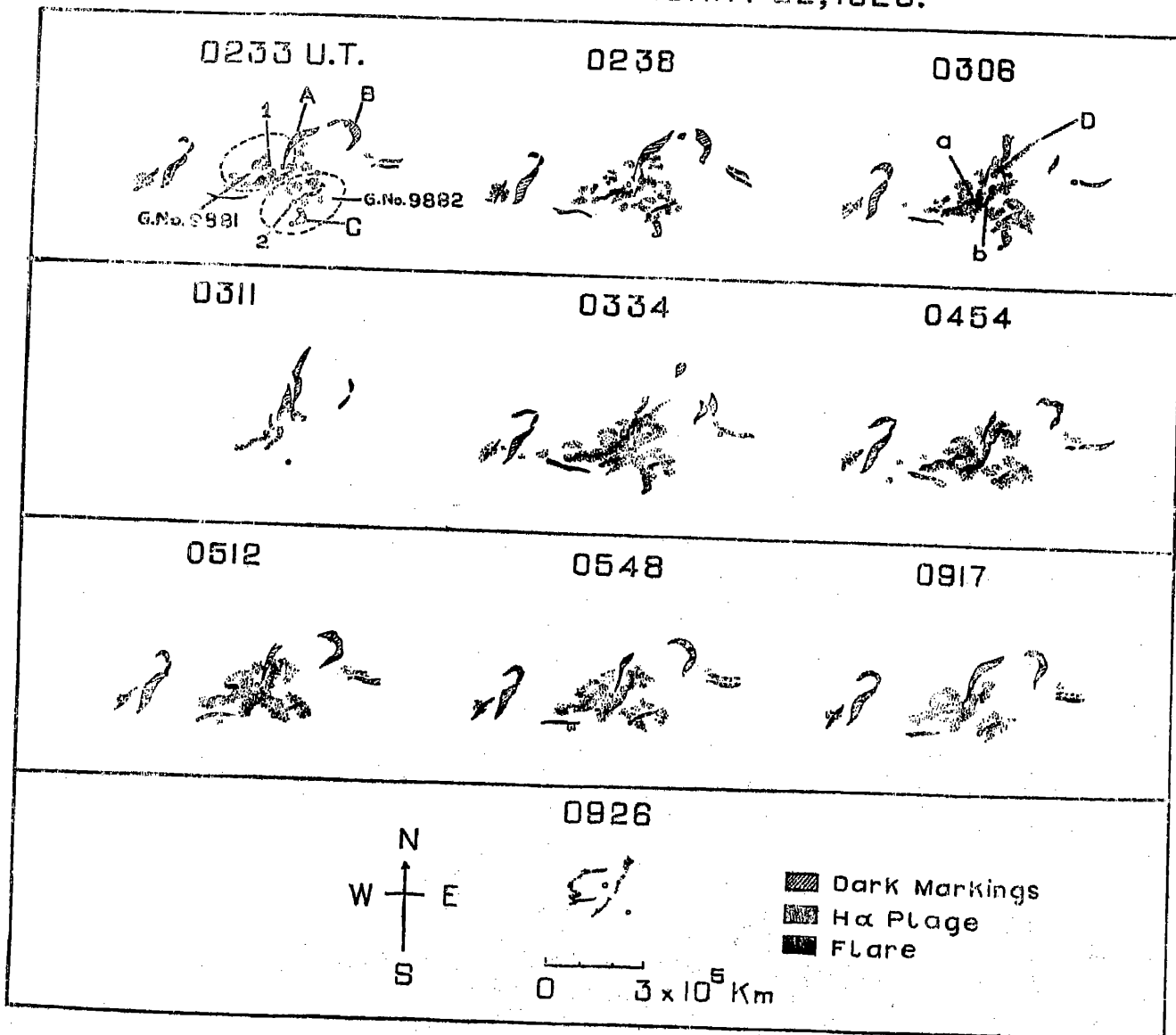


Fig. 1.

(ii) *March 3, 1926.*—Greenwich spot group No. 9885. Mount Wilson classification  $\beta p$ . Importance class 2. Coordinates  $30^{\circ}S, 20^{\circ}E$ ; P. A.  $30^{\circ}$ .

Two major spots 1 and 2 forming a bipolar group were surrounded by a complex  $H\alpha$  plage structure. The flare evolved near the large spot 2 and proceeded toward a few small spots that lie between the two spots forming the bipolar group. The run of the flare was in a curved path, and appeared as if being 'anchored' in the fine  $H\alpha$  striation pattern located in the immediate vicinity.

A number of dark filaments appear aligned along the 'vortical' structure around the spots. Among the dark filaments which show changes in their shape are A, B and C as shown in Figure 2. These three filaments were 2 to 4 days old and were disrupted into small lengths with conspicuous changes in shape.

Associated with each dark filament is seen a 'barb' like structure of small striations, shown to exist previously by Kiepenheuer (1953). These 'barb' like structure show changes in all cases, where the filaments show any change in their shape.

(iii) *June 18, 1937.*—Greenwich spot group Nos. 12385 and 12388. Mount Wilson classification  $\delta\beta\gamma l$  and  $\delta\beta l$  respectively. Importance class 2. Coordinates  $17^{\circ}S, 9^{\circ}W$ ; P. A.  $21^{\circ}$ .

The flare originated between the well developed spot group No. 12385 and the two day old group designated as G. No. 12388. The spot group G. No. 12385 (Figure 2) had distinctly two active regions I and II. The region I had given rise to a Class 1 flare on an earlier day, and remained inactive on June 18. The flare extended from the  $H\alpha$  plage region near the following spot of G. No. 12385, towards the preceding spot of the developing group (G. No. 12388). The flare extended to the immediate vicinity of this spot and covered the spot completely at maximum phase. It is interesting to note that, though the bright plage existed between spots 1 and 2 as denoted in the figures, the flare ribbons spread towards spot 3, instead of the region that was active the previous day.

Filament F, embedded in the plage structure showed no activity, while filaments D and G show changes in shape even though they are located at a distance from the active region.

(iv) *December 15, 1956.*—Mount Wilson spot group No. 12016. Mount Wilson classification  $\delta\beta fl$ . Importance class 2. Coordinates  $20^{\circ}S, 20^{\circ}W$ ; P. A.  $16^{\circ}$ .

Spot 1 of the group appeared only on December 13, while spot 3 of this bipolar group was in its mature stage (Figure 2). The main flare run was between the two newly formed spots 1 and 2, and on either side of a small dark thin filament C. Another region Z near the spot 3, also flared up simultaneously. Around the maximum, the flare ribbons completely covered the smaller spot 2, while the larger spot 1, was avoided by the flare; similarly spot 3 was not covered by the flare filaments.

The streaky dark filament C near the active region X and Y vanished during the flare, while filaments A and B remained unaffected.

(v) *February 21, 1931.*—Greenwich spot group No. 11355. Mount Wilson classification . Importance class 2. Coordinates  $7^{\circ}N, 10^{\circ}W$ ; P. A.  $18^{\circ}$ .

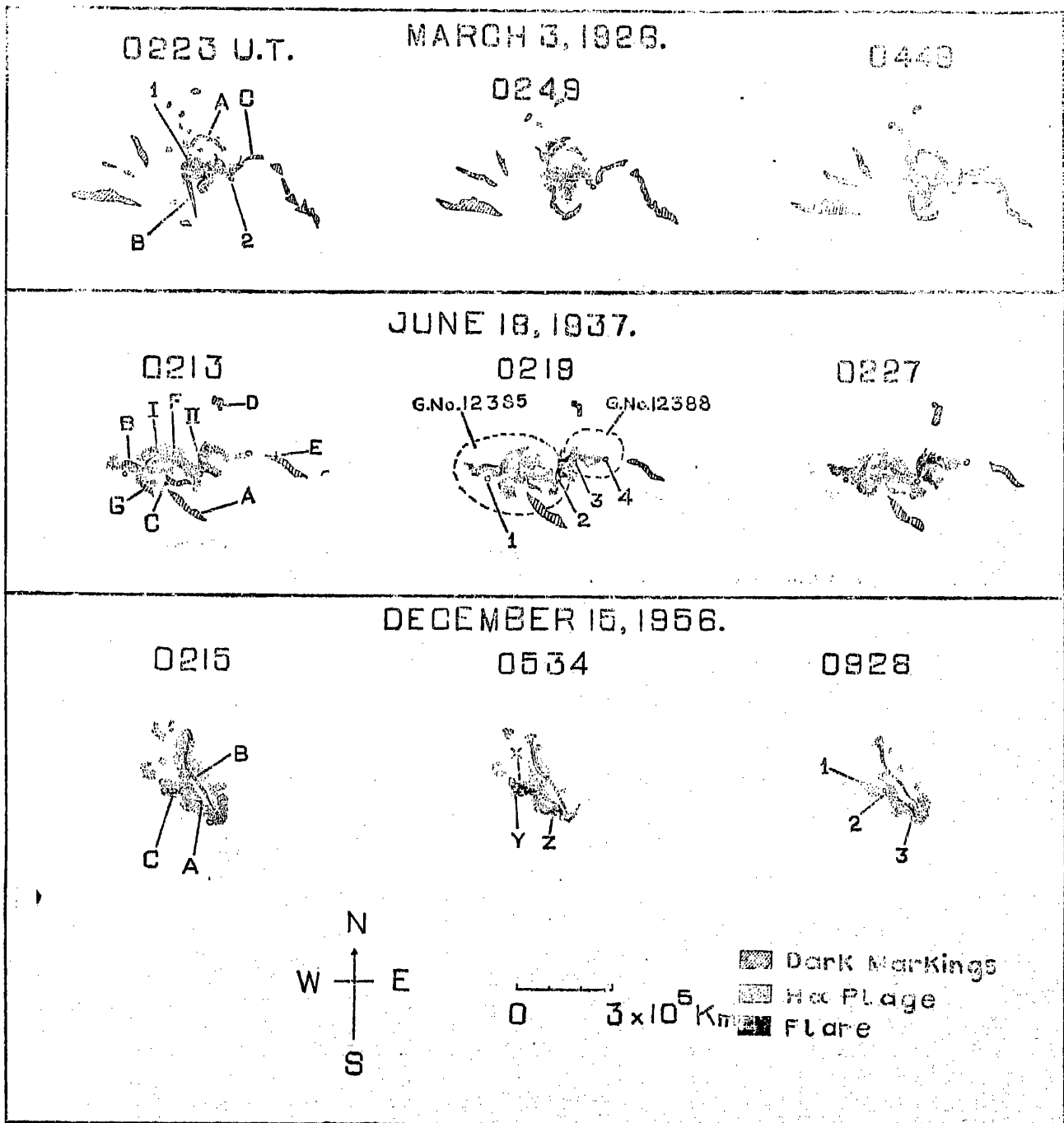


Fig. 2.

This bipolar group was embedded in the H $\alpha$  plage structure and a small thin dark filament C (Figure 3) was directed towards the preceding spot. Around 0318 U.T. the H $\alpha$  plage region, near the dark filament, brightened up to form the flare and at about the same time a bright surge S, was seen ejecting out towards the dark filament A. The ejection continued upto 0354 or even a little later, while the filament A, had vanished during the initial surge ejection. When the activity in region I was on the decline a region II, between the spots started brightening. The run of the bright ribbons was from the larger of the two spots towards the smaller one. Slight changes in the shape of filament B were noticed, but these could be assigned to its intrinsic activity. The H $\alpha$  striation pattern and the filaments within the S-W sector, remained unaffected.

(vi) *November 26, 1938.*—Greenwich spot group No. 13086. Mount Wilson classification  $\delta\beta\gamma$ /l. Importance class 1. Coordinates 12°N, 38°E; P.A. 42°.

G. No. 13086 around which the flare of importance 1 occurred, was a complex group containing an extensive stream of spots in a stage of rapid development. The Greenwich spot observations show large scale changes in the appearance of the group from day to day. According to the Greenwich photoheliograph results "an extensive lateral off-shoot from the leader spot on November 26 nearly closes the gap between the leader and the follower, and this link, with its train of nuclei, continues for several days as distinctive feature". On November 26 four separate regions within the group flared up and extended towards the following spot. During the rise and decline the flare avoided spot 1 (Figure 4) but had completely covered the smaller spots of the group.

The dark filaments around the active region show no changes. The arch shaped filament A, which appears to join the two spots exhibit some change. As may be seen in Figure 4 the filament A had lost its contrast till the flare completely subsided.

(vii) *September 23, 1939.*—Greenwich spot group No. 13420. Mount Wilson classification  $\beta\beta$ /l. Importance class 1. Coordinates 20°S, 19°W; P.A. 34°.

A few small pores, east of this bipolar spot group by about 10°, were in a stage of development. A dark filament A, was embedded in the plage region near the spot 1 (Figure 4). Two separate regions, one near the spot 1, and the other just over the pores brightened up simultaneously around 0507 U.T. In the active region 'a', the flare developed on either side of the thin dark filament A. As the flare proceeded towards the SE direction, the filament A also appears to have increased in length, keeping both the two portions of the flare patch separated. The dark filament B, remained unaffected during the flare. The striation pattern shows no changes other than those which could be assigned to changes in seeing conditions.

(viii) *October 23, 1939.*—Greenwich spot group No. 13454. Mount Wilson classification  $\beta\beta\gamma$ d Importance class 1. Coordinates 14°N, 17°E; P.A. 19°.

The two spots of this complex group merged together and showed distinctly two umbrae within a common penumbra. This group appeared on the eastern limb and disappeared on October 27, indicating that the flare occurred during the declining phase of the spot's life. The rise of the flare was very sudden and the two halves of the H $\alpha$  plage structure on either side of the spot (Figure 4) were linked by a bright filamentary structure of the flare. The spot remained covered during the rising and the maximum phase, but was soon visible as the flare declined.

The two radially directed dark filaments remained unchanged, except for the far ends of the two filaments A and B, which did not retain their former shape.

(ix) *September 19, 1957.*—Mount Wilson spot group No. 12622. Mount Wilson classification  $\delta\beta\gamma$ /l. Coordinates 22°N, 2°W; P.A. 20°. Importance class 2.+

## THE FLARE OF FEBRUARY 21, 1931.

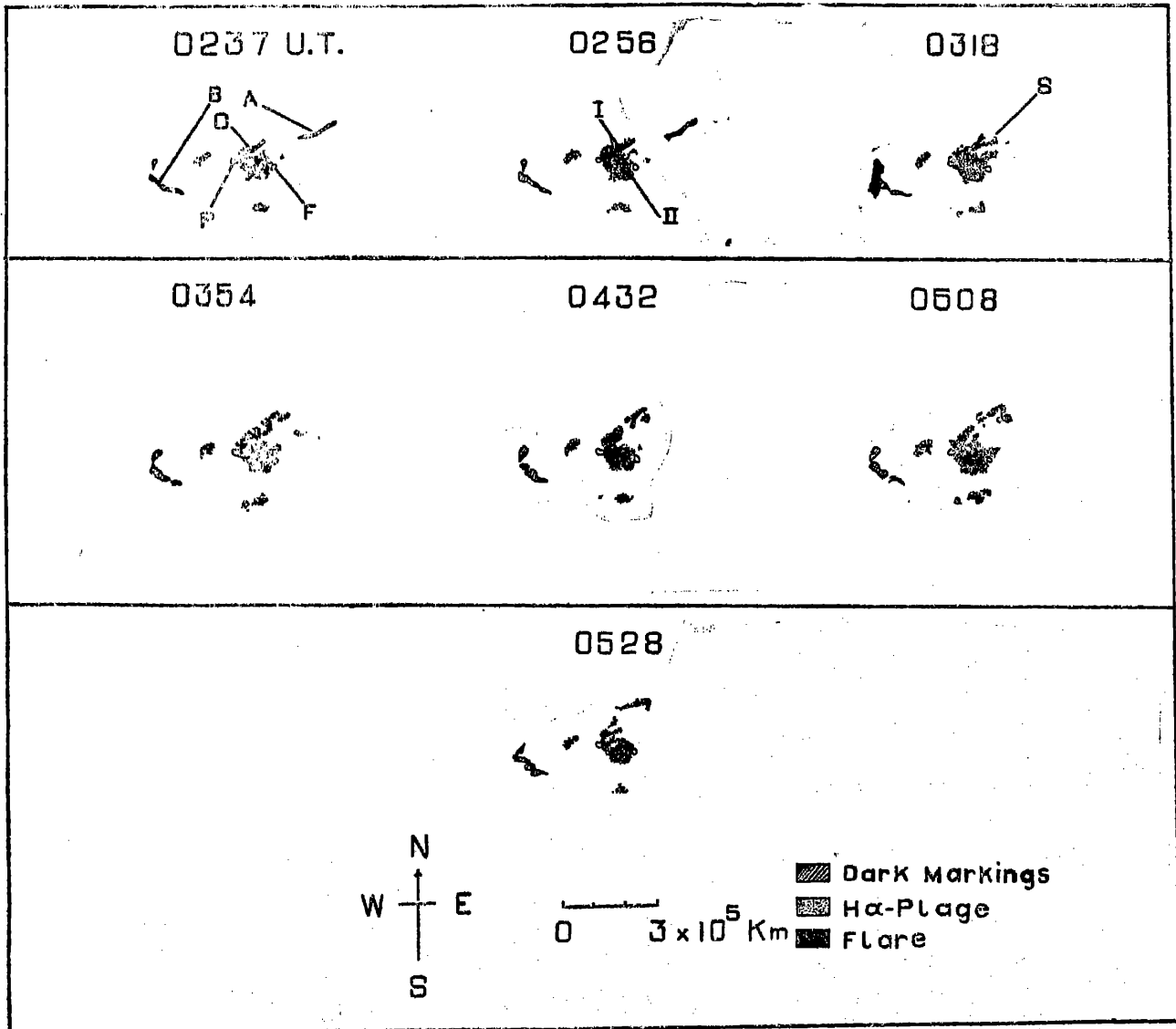


Fig.3.



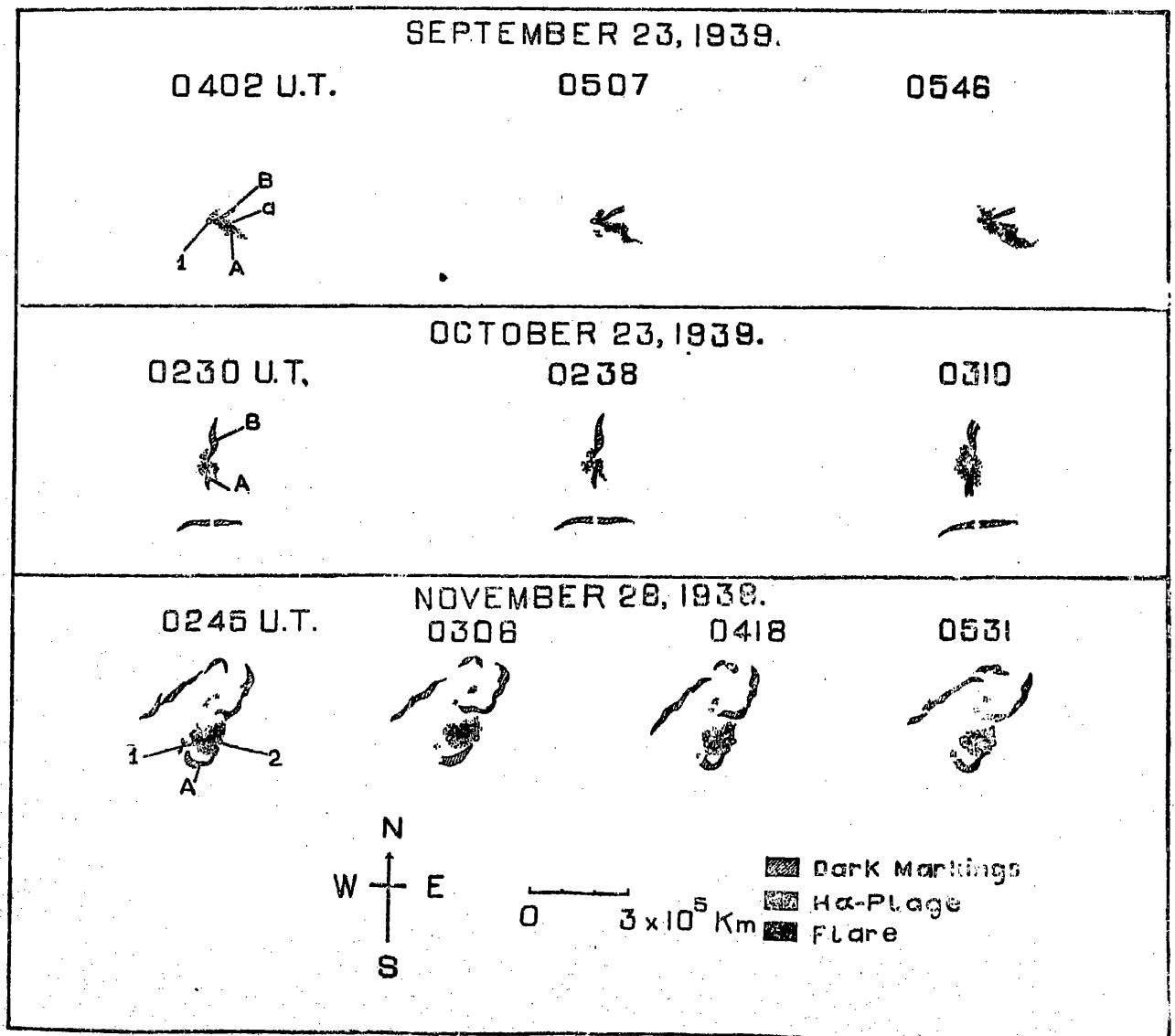


Fig. 4.

This active McMath plage region 4151, is characterized by its unusually strong recurrent activity. On September 18, Jefferies et al. (1959) observed two class 2+ flares and one class 3+ flare within this active region. The same region again flared up after about 15 hours to give rise to another class 2+ flare on September 19. A spectroscopic study of this flare has been reported by Jayanthan (1959). This complex bipolar group was in advanced stage of development. The active region was surrounded by a number of thin curved dark filaments (Figure 5). These dark filaments show hardly any activation, except for the filament A, which shows a slight change in shape. A small curved dark filament D, though lying close to the active region shows no change. Plates taken before and after the major flare events of September 18, show no changes in filament structure before and after the flares.

On September 19, before the occurrence of the class 2+ flare at 0416 U.T., a small class 1+ flare had flared up exactly in the same place at 0246 and had ended at 0327 as is shown in Figure 5. The class 2+ flare originated when two areas near spot regions 1 and 2 had a simultaneous increase in intensity with a ribbon formation. Around the maximum phase, the flare covered the umbra of spot 1. This flare of September 19, occurred at the same place as that of September 18, with only the active region, west of spot 1, which had shown strong brightening on September 18 remaining inactive. The run in all four cases of major flares had always been along the line joining the two spots of this group.

On the succeeding two days (September 20 and 21) we have observed at Kodaikanal two class 1 flares in the same region. The run of these flares was also along the same path as in the case of earlier flares.

### Discussion

The area and the nature of the spot group around which a flare occurs play an important part in the occurrence of solar flares. From the Greenwich photoheliographic results, we see that the major solar flares occur during an advanced stage of formation of the large bipolar or complex multipolar groups. Less intense flares generally confine themselves only to that part of the spot life, when the magnetic field and area are changing, which happens during the development or declining phases of the spot's life. No correlation has yet been detected between the complex nature of spot group and either duration or importance of the flare.

In all cases, both minor and major flares evolve from the pre-existing  $H\alpha$  plage structure lying within the confines of the spot group. In the cases studied above, the portion of the plage nearer to the large spot of the bipolar spot group brightens up earlier and the flare runs towards the smaller spot or spots of the group. If the separation of the two spots is considerable, the flare 'thins out' into ribbon like structure  $2 \times 10^3$  Km. to  $10 \times 10^3$  Km. wide on the average for minor flares and about  $10^4$  Km. in the case of major flares. But, if the separation of the spots is not large, the flare has an amorphous structure.

Minor flares tend to avoid the umbral region of large spots, while they invariably cover the small spots and pores. Flares generally show preference to spread towards the spot which is developing. Major flares in their course of development, generally run right across the group and cover the spot-umbræ which usually have large area and magnetic field strengths. In the case of the February 22, 1926 flare, we find that the duration of extension of the flare over the umbra is confined to only the peak phase of the flare. Very soon after, the flare ribbons over the umbra vanished, even though the declining phase has not set in the rest of the flare. In the case of small flares the duration of the coverage of spots and pores last until the complete decline of the flare.

The portion of the plage structure lying near the large spot of the active group generally brightens up first. In some cases as in the flares of September 23, 1939 and February 21, 1931 the run of the bright filament is usually confined along the length of dark filament 'anchored' in the plage region, and which is known to orient itself along the path of neutrality in the magnetic field. These cases support the argument that flares have a tendency to follow the neutral points.

## THE FLARES OF SEPTEMBER 18, 19, 20 AND 21, 1957.

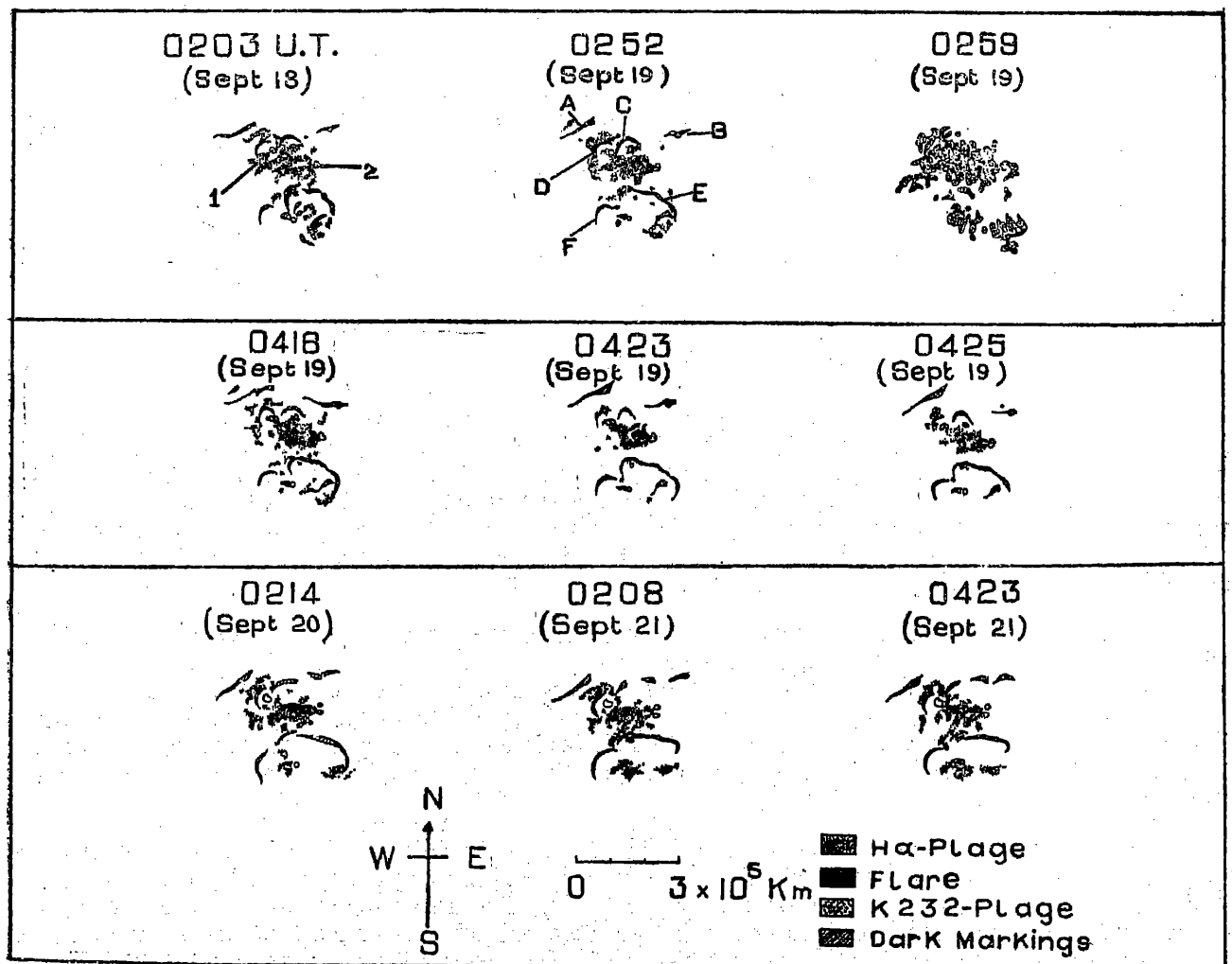


Fig. 5.

When major flares occur, dark filaments lying near the active regions suffer 'disparition brusque' similar to the case of filament A of the February 22, 1926 flare. The minor flares studied do not seem to have any effect on the neighbouring filaments. In the case of the flares of September 18 and 19, no dark filament near the active region was affected. Either the intensity of the ionizing radiations may be less in these flares or the strength of the disturbances originating from the flare was not sufficient for a 'disparition brusque' to occur.

In the normal case of a 'disparition brusque' dark filaments generally vanish suddenly or get disrupted into small parts before they vanish completely. The recovery of the 'blown off' filament is quite slow and in all cases the restoration is effected in small lengths linking together to form the original filament (Kiepenheuer 1953).

Ellison (1949) finds that 50 per cent or more cases of class 2 flares are associated with bright or dark high velocity surges. The phenomenon of a high velocity surge is very difficult to trace on spectroheliograms because of Doppler shift values exceeding the second slit width. In the case of the flares of February 22, 1926 and February 21, 1931, bright surges could be seen. In the above two cases where a surge phenomenon is observed, dark filaments in the geometrical extension of the ejected mass, vanish completely. We consider these as cases representative of an interaction of fast moving surge material with the mass of gas of the dark filament.

As has been mentioned earlier, the obscuration of the striation pattern and the changes of the obscured area with the rise and decline are conspicuous in case of 'super-flares'. No such effect of obscuration could be seen in the case of flares of importance 2 or 2+.

*Acknowledgements.*—It is a great pleasure to acknowledge our indebtedness to Dr. M. K. Vainu Bappu for suggesting this problem and constant guidance during the course of investigation. Our thanks are also due to our colleague Miss. N. Subrahmanyam for her helpful discussions. This work was done during the tenure of a Senior Research Scholarship kindly awarded by the Ministry of Scientific Research and Cultural Affairs.

KODAIKANAL OBSERVATORY, }  
October, 1962.

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# Kodaikanal Observatory

BULLETIN NO. CLXIII

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## AN ANALYSIS OF ERUPTIVE PROMINENCE MOTIONS

By

NIRUPAMA SUBRAHMANYAM

### Abstract

The motions characterising the eruption of eight prominences have been studied. It is found that all parts of a prominence adhere to a general pattern of motion, on which are superposed small, but significant individual deviations. Sky-plane components of the trajectories tend to fall broadly into two types; one type showing strong curvature and large accelerations transverse to the direction of solar gravity, while trajectories of the second type are long and curved slightly, showing large accelerations away from the sun. It is suggested that an eruptive prominence has a compound magnetic field, consisting of a stable weak field and a momentary strong component; and that the type of trajectory of erupting material is primarily decided by whether the equilibrium in the active prominence is destroyed, by the kinetic energy exceeding the magnetic energy or *vice-versa*.

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### Introduction

The study of eruptive prominences has a history of well over half a century. One of the earliest attempts at the measurements of their velocities and accelerations in a two-coordinate system is due to Evershed (1908, 1917). Later, comprehensive time-height analyses by Pettit (1925, 1936) yielded a large amount of data, from which Pettit obtained his two laws of prominence motion. The subsequent introduction of cinematographic techniques has completely revolutionised concepts of prominence motion, while facilities for obtaining line of sight velocities (McMath) (1940) have helped to formulate three dimensional models. Modern analyses that utilise either or both of these techniques have contributed to the following developments :

- (a) The limitations of Pettit's first and second laws of prominence motion have been examined.
- (b) It has come to be realised that light pressure, gravity, hydrodynamic forces etc. alone as agencies of support and movement of prominence material are inadequate by several orders of magnitude.
- (c) The role of electromagnetic forces has received increased recognition.
- (d) High speed rotatory and circulatory movement of prominence material, as revealed by motion pictures, has led to the concept of trajectories of prominence material following magnetic lines of force.

While the above developments have been very significant in themselves, no analyses of sequences of different eruptive prominences in the light of more recent findings seem to have been undertaken, since Pettit's classic contribution. The Kodaikanal collection of Calcium prominence plates provides material for just such a study. The 57 year collection consists of conventional prominence pictures taken with a spectroheliograph, the second slit of which is centred on the  $K_{844}$  line. The frequency of exposure of the plates available for analysis is usually about one in four minutes during the eruptive phase of the prominence. Although cine-techniques provide more frequent pictures, those obtained at the rate of one in four minutes would be adequate for studying the gross features of prominence fields and their changes, as these force fields have been shown to be stable over a period of at least 45 minutes (1953).

### **Selection and Measurement of Plates :**

For the purpose of the present investigation sequences of eruptive prominence plates taken under conditions of good to average seeing and showing striking changes in shape and structure were chosen. The origin of a rectangular coordinate system similar to that used by Dodson (1948), was located on the limb, with reference to stable features on the chromosphere. The 60 mm (diameter) image of the original plate was enlarged nearly three-fold. The radial Y reference axis passing through the origin was superimposed on it. The final print on which measures were made with a millimetre grid had, therefore, a scale of 7541 Km/mm. The grid was read upto 0.25 mm so that the smallest distance measured was 1900 Kilometres. The choice of features in a prominence sequence was governed firstly by the possibility of unambiguous identification over the entire sequence, and secondly, by their ability to be representative of the structure and behaviour of the prominence. The latter is important for understanding the general nature of prominence eruption. Therefore, constrictions in structure, points of bifurcation of two streamers and knots located at sharp changes in the boundary were selected. The features chosen were as well distributed over the prominence as possible.

Besides the errors inherent in such an analysis (1955), the reliability of the position measurements obtained depends on :

- (i) The accuracy of identification of the same feature of the prominence on different plates,
- (ii) The identical location of the origin on the various plates,
- and (iii) Correct orientation of reference axes.

In the present analysis (i) was ensured, to a large extent, by independent confirmation of each identification. The location of the origin and orientation of reference axes were checked at the final print stage, against a stable feature other than the one selected originally. The error on these counts is thus limited to within the smallest distance measured.

### **Analysis of Measurements :**

The X, Y position measurements of each feature of a prominence were plotted against time, and mean curves were visually fitted. From these plots, X and Y were read off at equal intervals of time and accelerations derived from these by numerical differentiation. It must be emphasised, in this connection, that these accelerations can only give a broad idea of the changes in force fields, since differentiation vastly accentuates small irregularities in smoothing.

To obtain the overall spatial traverse of the various features in relation to each other, complete trajectories in the plane of the sky — X, Y plots— were drawn. Along these trajectories resultant acceleration vectors were drawn at equal time intervals. These time intervals range from 5 to 30 minutes for the different prominences as is appropriate to each of them.

The values of positions and accelerations of individual features for the eight prominences studied are given in Tables I—VIII (Appendix A). Column I refers to time in U.T., column II indicates position angle of the origin of the coordinate system, columns III and IV give  $X$  and  $\ddot{X}$  expressed in units of  $10^3$  Kilometres and  $10^{-3}$  Kms/sec<sup>2</sup> respectively and columns V and VI furnish data on  $Y$  and  $\ddot{Y}$  in similar units.

### Prominence of February 18, 1908 :

This prominence has been analysed by Evershed (1908). He has calculated the velocities and accelerations to which parts of this prominence were subjected.

On February 18, the observations of the prominence on limb extend from 0408 U.T. to 1211 U.T., covering the active and eruptive phases. At 0408 it is seen as a large 'hedgerow' prominence the base of which extends over  $30^\circ$ . With reference to the origin of the coordinate system the highest part of the prominence is approximately 110,000 Km. The prominence shows detailed internal structure with sharply defined regions of high intensity embedded in a less distinct, filamentary background. The entire prominence has a sharp boundary. Knots A, B, C, D and E are located as shown in Figure 1 (a). The overall structure remains the same with slight changes in detail till 0535, when the well defined structure demarcated by C, D, E, B tends to rise. The southern edge streams down to the limb (point F in figure). At 1142 the rise is more striking and the prominence is completely detached from the chromosphere except for point F. By 1147 the prominence has become diffuse and the northern tip is no longer visible. The last picture at 1211 shows a dome shaped floating cloud having no apparent connection with the chromosphere. The point B which is the highest visible part of the prominence, is at a height of 200,000 Km above the origin.

The  $X$  versus time curves are shown in Figure 1(b). It is seen that during the active phase of the prominence, all the  $X$ -T plots are nearly identical. At 1035 the plots show a tendency to either curve up or down. Knots E, D and B curve down while knots C and A curve up, implying clearly, an expansion in the  $X$  direction.

The  $Y$  versus time plots— Figure 1 (c)— are also very similar for the different knots of this prominence, showing a steady increase with time, although individual knots do so at slightly different rates. This confirms Dodson's (1948) findings that every part of the prominence is characterised by the same group motion, while individual distinctions remain.

The resultant of the computed  $\ddot{X}$  and  $\ddot{Y}$  acceleration vectors in Km/sec<sup>2</sup> for the prominence have been plotted in Figure 1(d). The acceleration vectors have been determined at half-hour intervals and plotted along the respective  $X$ — $Y$  trajectories of the knots. The directions and magnitudes of vectors at particular instants of time for the different knots indicate no definite relationship. Again, no similarity between vectors situated in particular space regions is evident. The acceleration vectors show a definite tendency to change direction and reverse several times along the trajectory. The highest acceleration recorded is by feature B, approximately 1/3rd of  $g$ , and almost transverse to it. Accelerations at instants later than 0930 would be much higher, but the slow convergence of the numerical differentiation formula does not yield accurate acceleration values in the later phases of the observation.

The  $X$ - $Y$  trajectories themselves are very instructive. The trajectories are highly curved, each having slightly different curvature from the other. There is a gradation in the curvature in the direction of increasing  $X$ , with trajectory E at one end tending to be definitely anticlockwise and A at the other end decidedly clockwise. These trajectories emphasize, that, while the general motion of the five features is similar, there is a strong guiding factor present, the spatial configuration of which controls the details of individual knot motion.



FEBRUARY 18, 1908.

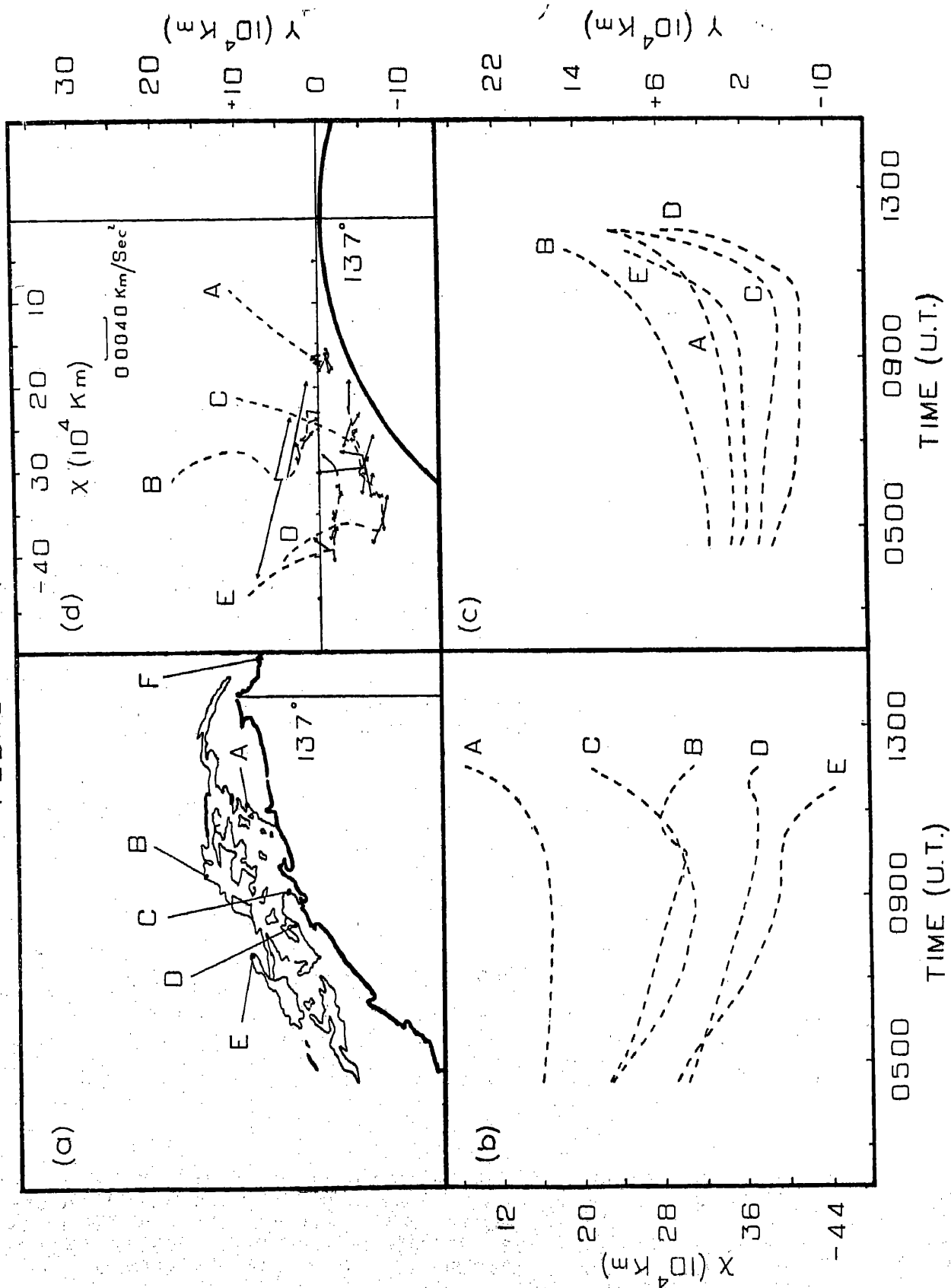


FIG.1.

This prominence erupted on the east limb and to find any related disc phenomenon on the west of the prominence in question,  $\text{Ca}^+$  plage plates of 17th and 18th were examined. The disc plates indicated no special features in the concerned region. The  $\text{Ca}^+$  plage plates of the following day bring into view a plage region with a small spot in it. With respect to this region, the erupted prominence would have been placed to the west and along the poleward fringe.

#### Prominence of December 31, 1920 :

This is a fairly large and strikingly filamentary prominence. It erupted on the west limb.

$\text{Ca}^+$  plage plates of December 31 show that the prominence is located to the west of the plage region, on the poleward side of it. This region with a spot in it (Greenwich gr. No. 9277) can be traced back upto December 20. No activity in the form of flares is traceable from December 20 to December 31.

The prominence when first observed at 0237 U.T. is already undergoing eruption. Formed like an arch approximately 200,000 Km in height, it spans a region of  $45^\circ$  around the limb. The southern tip of the arch does not reach the limb until later, at 0312. From the first observation at 0237 the whole prominence rises almost as one unit, with end F [See Figure 2(a)] rooted to the chromosphere. The most striking feature during this ascending phase is the change in detail noticed around the region R. At the beginning of the observation, several diffuse filamentary strands are seen. In the next picture at 0249, these strands have come closer together. At 0312 they have come very close to each other and have become compact and bright. At 0323 these join together to form a bright streamer. Thereafter it remains a single streamer and ascends along with the rest of the prominence becoming fainter and fainter. Following the prominence right through the eruption, it is noticed that certain sharp patterns persist. The longest enduring among these is the feature C, D which is seen even in the last picture when other features, visible earlier, of the prominence remain unidentifiable. Feature C rises particularly high above the chromosphere, almost to a height of 620,000 Km above the origin. There does not seem to be any extension of the prominence on to the disc, which has withstood eruption.

The X-T curves of the four knots A, B, C and D are shown in Figure 2(b). Here also, as noticed in the previous prominence, there is the same general trend in the X—T plots of the four knots. Even so there are obvious differences. Knot A shows an increase in X, till 0307, decreasing thereafter fairly rapidly. Knot B on the other hand, only shows very slight increase in X till 0250, after which it decreases in X less rapidly. Knots D and C show no substantial increase in X at all. They remain constant in X till 0310 and then decrease slowly with time.

The individual differences between Y-T plots shown in Figure 2(c) are few. Knots B, C and D have nearly identical curves in the Y-T plots. The curve for knot A has a more gradual slope.

These variations are brought out in a significant manner in Figure 2(d), where X-Y trajectories are drawn. A shows a fairly pronounced curvature. This curvature decreases for B and C and is least for D.

The resultant acceleration vectors at 10 minute time intervals are also represented in Figure 2(d); the length of the vector gives the magnitude, and its orientation gives the direction of the sky plane component of the space acceleration. The chaotic changes in magnitude and direction of these vectors is very evident, showing frequent reversal in direction.

The outstanding difference between the prominence of February 18, 1908 and this one is that the X-Y trajectories for the former show strong curvature, within a short path length, while in respect of the latter the trajectories are long and slightly curved.

DECEMBER 31, 1920.

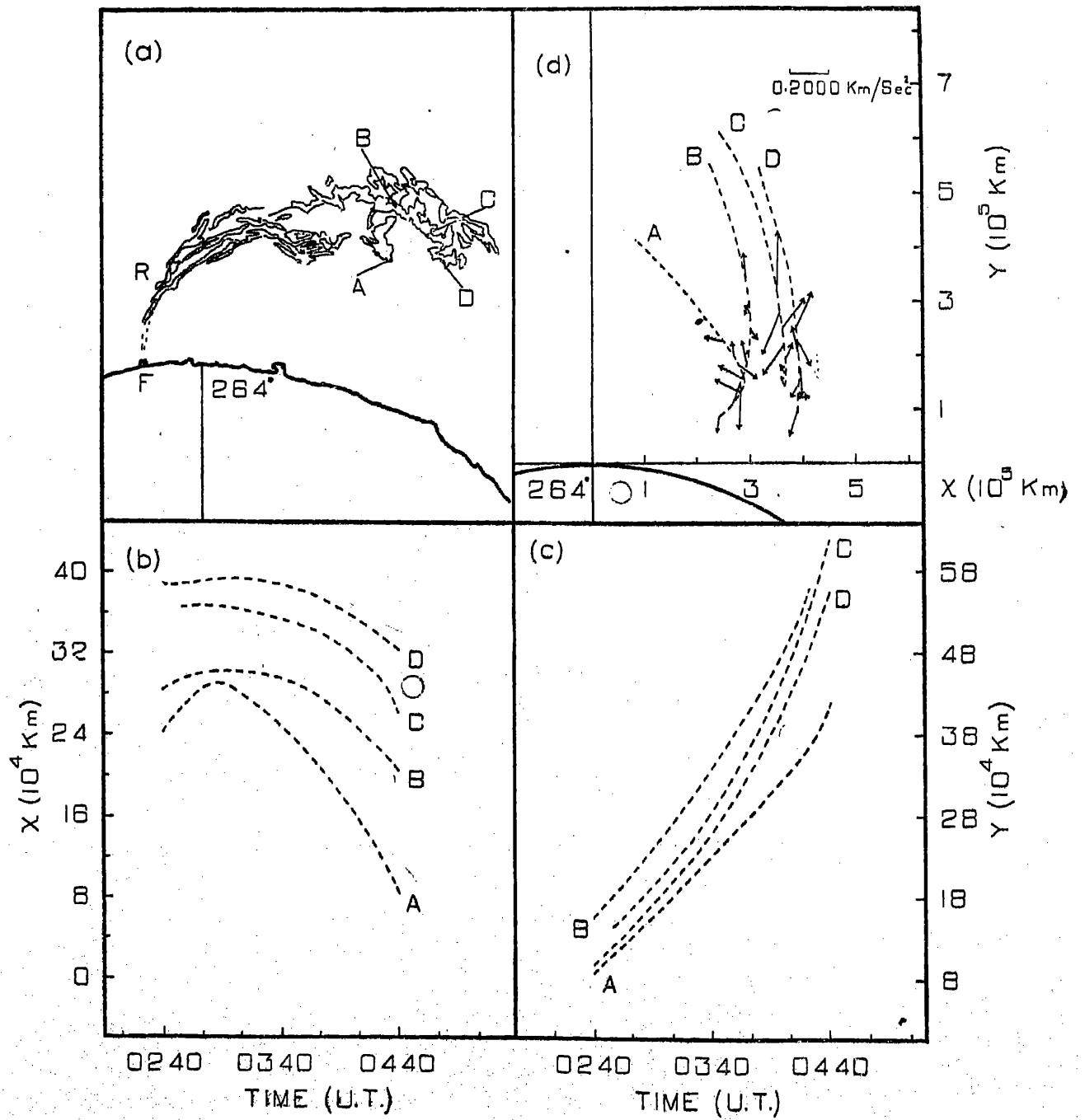


FIG.2.

### Prominence of October 20, 1925 :

This prominence erupted on the west limb and has no detectable active region associated with it. H $\alpha$  disc pictures show the prominence as a filament from October 7 onwards. As it traverses the disc, the filament stretches itself, with a new segment added to its eastern tip. It attains its greatest length on October 14. The orientation all along is very nearly east-west. After October 14 the newly acquired eastern section starts separating out into independent segments. This process is more evident on subsequent days. On October 19, the western tip is projected beyond the limb and it is this portion that erupts on the following day. The fact that the process of fragmentation sets in almost a week before the observed eruption is worth noting.

As for the eruption itself the first observation at 0232 U.T. indicates two bright strands presenting a twisted appearance. At 0309 one strand is seen to move relative to the other. At 0326 the whole structure rises preserving the relative orientation. Thereafter the rise is rapid and the strands become diffuse. Here again, some patterns like that demarcated by E, D, C in Figure 3(a) are long enduring. Feature E reaches a height of over 500,000 Km.

The X-T graphs for the five knots A, B, C, D and E—Figure 3(b)—show that all the plots tend to converge to a point with X coordinate around 250,000 Km, at 0407. All the knots follow nearly similar trajectories having small slopes till 0310. After 0310 the plots rise up steeply with the different curves tending to cross each other.

Y-T $^2$  curves, *vide* Figure 3(c), are all identical. The X-Y trajectories shown in Figure 3(d) display different curvatures. This is to be expected in view of the crossing of the knots evidenced in the X-T graphs. Figure 3(d) also gives the resultant acceleration vectors in the plane of the sky, computed for 10 minute intervals. For feature D these give consistently large values comparable in magnitude to solar gravity. The acceleration vector reverses direction almost alternately. In regard to feature E the acceleration changes in magnitude from about 1/2 solar gravity at 0240 to approximately solar gravity at 0320. The majority of the acceleration vectors drawn are almost transverse to the direction of acceleration due to gravity.

This prominence of October 20, 1925 is similar to that of December 31, 1920 in that the X-Y curves only show small curvatures. The common feature of similar general motion with variation in detail is evident once again.

### Prominence of December 10, 1926 :

This prominence erupted on the west limb and is very close to the south pole. The presence of several filaments around this region makes an unambiguous identification of the particular filament concerned difficult.

In contrast to the fairly broad structures of the preceding prominences, this is a narrow long prominence. The prominence consists, for most part, of a very intense region, with a narrow, less intense region along side. The first picture at 0248 U.T. shows the highest tip of the prominence as being approximately 270,000 Km above the origin of the coordinates. At 0347 the prominence breaks off at A [Figure 4(a)] and ascends rapidly. The entire structure comprising of A, B, C, D and E rises together with no observable relative motion between the different parts. Around 0430 the prominence becomes broad and diffuse and disappears out of view at 0507. At 0450 the visible tip reaches over 600,000 Km above the chromosphere.

The curves—Figure 4(b)—show the changes in X with T. The X-T plots are nearly identical upto 0410 and thereafter tend to diverge. This is indicative of the fact that the prominence becomes broad at the later stages of eruption.

OCTOBER 20, 1925.

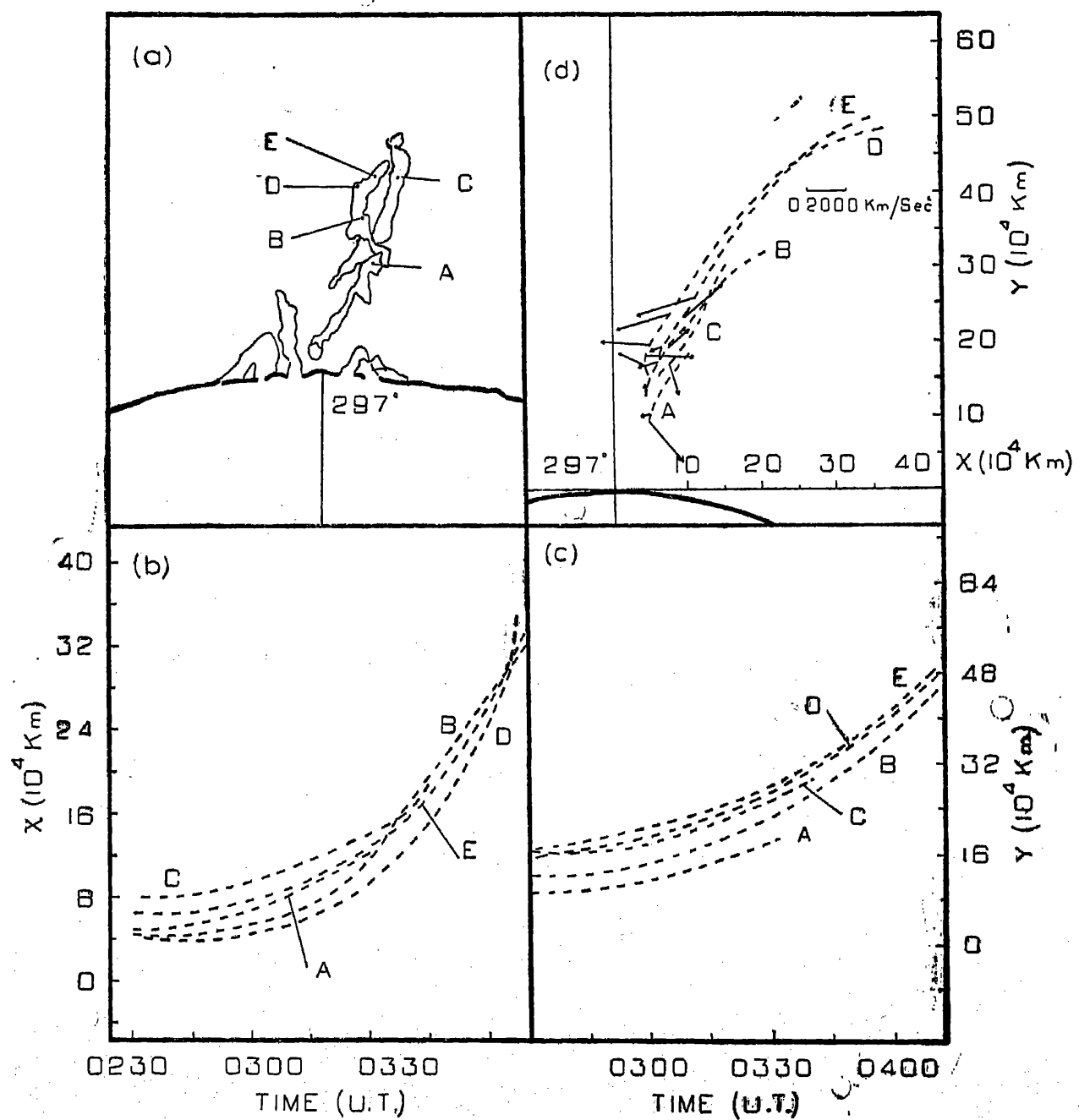


FIG. 3.

Y versus T plots in Figure 4(c) further confirm the great similarity of motion for the different parts of prominence. Also, the persistent narrowness of the structure is brought out by the fact that the various trajectories are confined to a very narrow region along the X axis. Acceleration vectors also shown in Figure 4(d) [here the X-Y plots for features B, C, D and E have been shifted by 2500, 5000, 7500, and 10,000 Km respectively, along the X-axis, from their true positions to show the acceleration vectors more clearly] once again point out the lack of a general pattern in their magnitude and orientation. Of the five features, C shows consistently large accelerations reaching as much solar gravity in magnitude. The directions of the acceleration vectors bear no relationship to that of gravity. Again alternate reversals of the direction of these acceleration vectors, drawn along the respective trajectories are in evidence.

In regard to the general shape of the X-Y trajectories this prominence would seem to belong to the same class as the prominences of December 31, 1920 and October 20, 1925 *i.e.*, the trajectories are long and curved slightly.

#### **Prominence of March 14, 1927 :**

The western portion of the prominence extends as a filament on the disc and seems to point to the following spot in a plage region. The eruption took place on the east limb.

At 0310 U.T. there is no sign of any activity whatsoever. At 0324 a short streamer is seen at P.A. 40°. The next picture at 0348 brings into view a broad column of luminous material. Subsequent pictures show this material resolved into a system of well defined knots and streamers. These have a distinct tendency to arch down into the chromosphere. From 0439 onwards all features show a tendency to twist around while descending. At 0544 the prominence is hardly seen above the chromosphere. The extension of the prominence on the disc survives eruption and traverses the disc with no substantial changes in structure. The filament retains its orientation in relation to the spot group *i.e.* points to the following spot right through its traverse.

X-T graphs in Figure 5(b) show that the identity in the plots for the different features exist only in so far as the knots are moving towards regions of increasing or decreasing X, with time. Apart from this, there is hardly any other feature characteristic of all the X-T plots.

The above statement applies equally to Y-T plots in Figure 5(c). In fact the Y-T plots exhibit more individual variations than the X-T plots.

It is the X-Y trajectories shown in Figure 5(d) that highlight the interesting aspects of eruption. Knots A, E and F show trajectories which twist in the anticlockwise direction. Knots, B, C and D twist around in the clockwise direction. The axis of twist is the same for both the right handed and left handed twists. Neither the right nor the left handed twists is confined to any particular part of the sky.

All the X-Y trajectories show pronounced curvature so that they are more like the trajectories of the prominence of February 18, 1908, than those of December 31, 1920, October 20, 1925 or December 10, 1926.

#### **Prominence of November 19, 1928 :**

This prominence has been reported by Royds (1928) as one of the highest ever recorded.

The prominence erupted on the west limb and was close to the south pole. There are a number of small filaments in the region concerned. Therefore the particular filament on the disc corresponding to this prominence on the limb could not be identified. Part of the prominence is seen projected beyond the limb even on November 18.

DECEMBER 10, 1926.

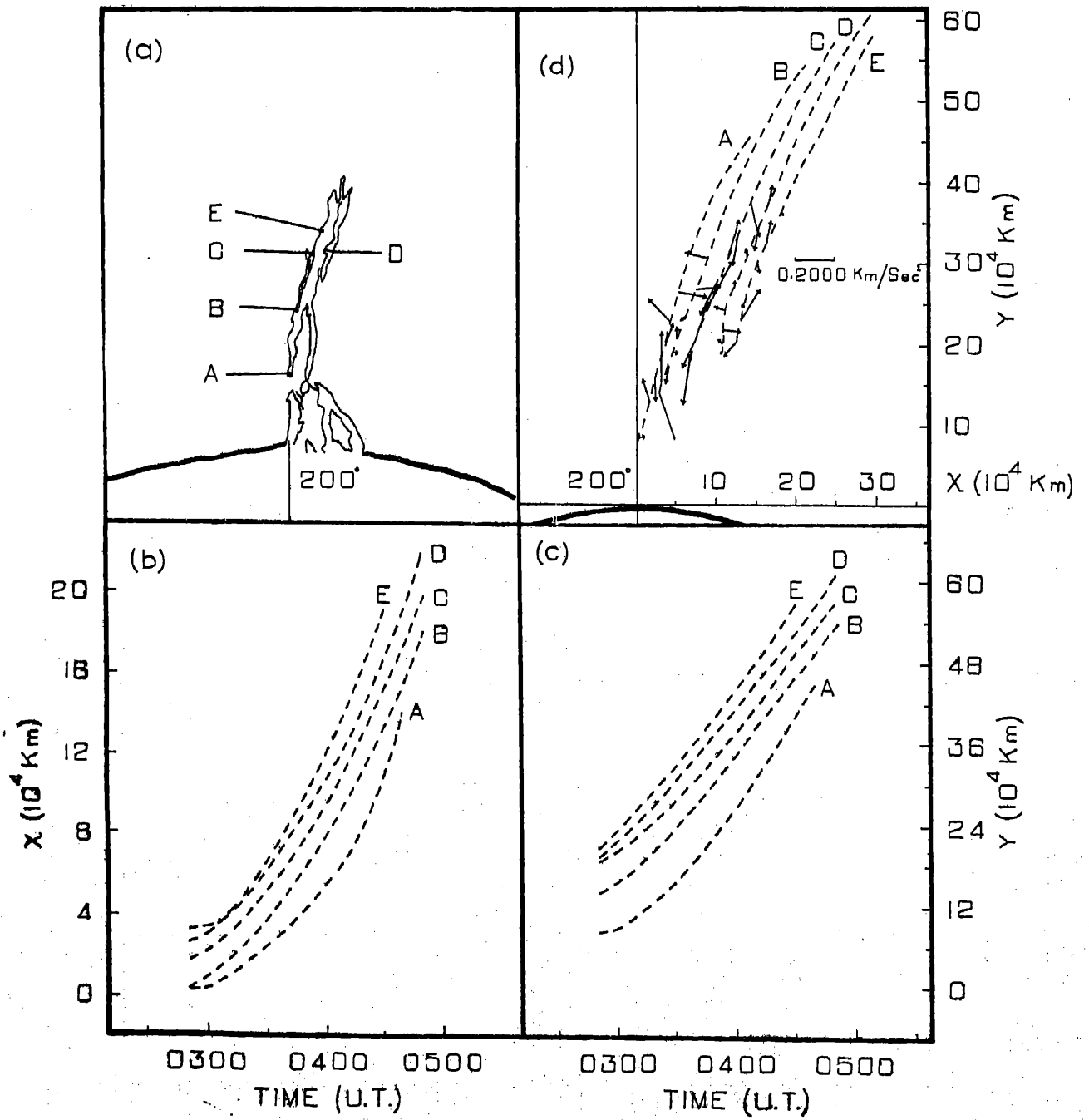


FIG. 4.

MARCH 14, 1927.

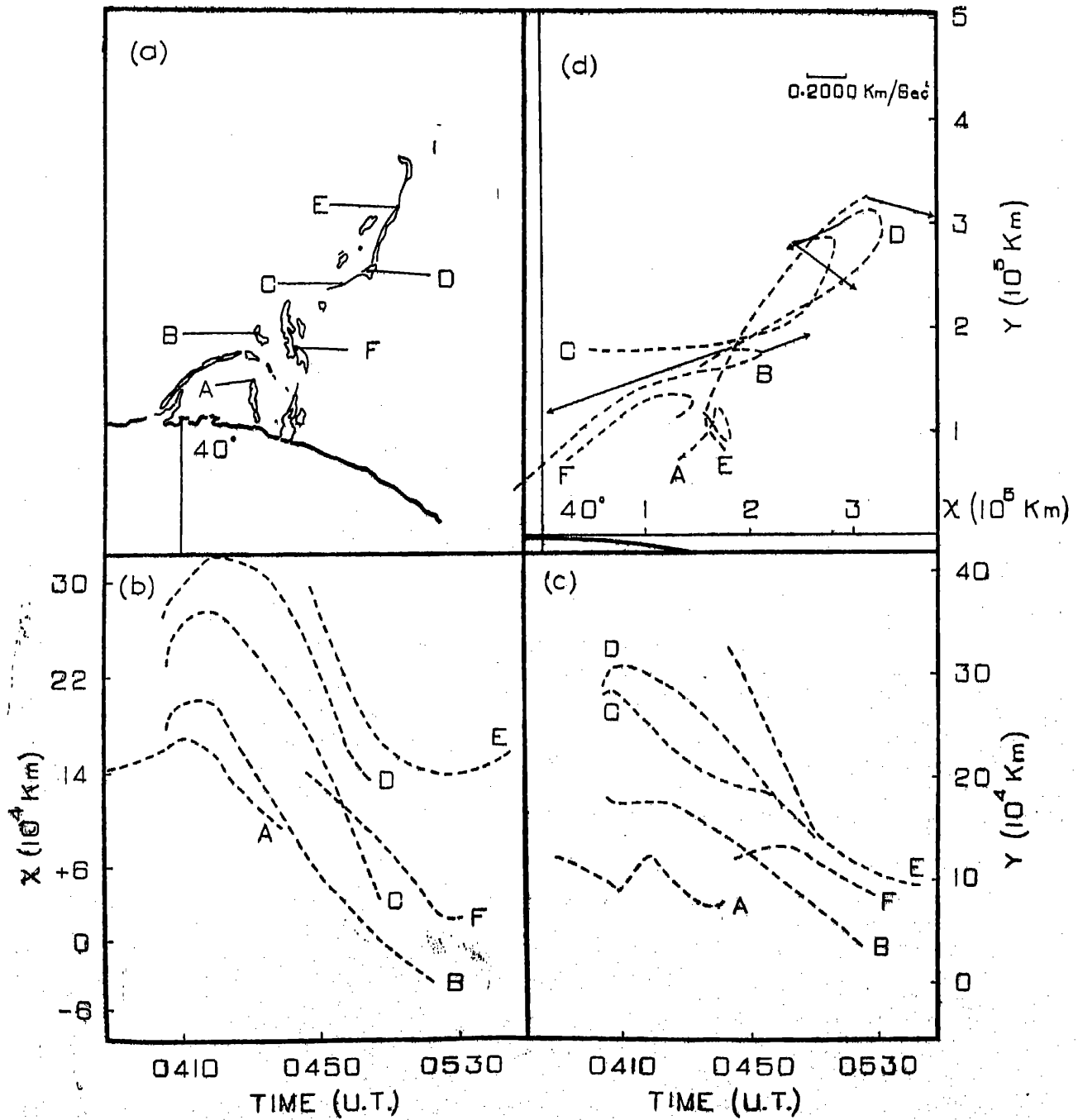


FIG. 5.



The first picture, at 0256 U.T. shows the prominence poised high above the chromosphere. The prominence consists of many fine filaments grouped in two bundles twisting around each other. The region around C—Figure 6(a)—is particularly bright. The whole prominence rises as one unit with small changes in structure. As it ascends the filaments separate out and become diffuse. At 0342, in the last picture of the eruption, the tip E reaches a height of over 900,000 Km. As pointed out by Royds if clouds had not prevented further observation it could have been tracked to greater heights.

The X-T graphs—Figure 6(b)—for the knots, A, C and D reveal a tendency to converge while the plot for E diverges.

The X-T plots—Figure 6(d)—show long, slightly curved trajectories. For each of the features the direction of ascent of the knot is at a small angle to the Y axis and then it turns off at a certain point along the trajectory. The turn-off point corresponds, as is evident, to the point of large change in slope noticed in the Y-T plots.

The ascent of this prominence is characterised by the tremendously large accelerations noted. Acceleration vectors in Figure 6(d) give an idea of the change in acceleration vectors at 5 minute intervals along the respective trajectories. Magnitudes of these vectors for the various features reach particularly high values at 0310, ranging from over 10 times solar gravity to 4 times solar gravity. There is, however, no discernible correspondence in the directions of the acceleration vectors for the various features.

The prominence is included in one of Pettit's (1932) analyses of prominence motion. He finds that there are distinctly two velocities of uniform motion, 81 Km/sec. and 200 Km/sec. The change from 81 Km/sec. to 200 Km/sec is shown to take place at about 0320. This is almost exactly the time at which the abrupt change in Y corresponds to the turn off point in the X—Y plot. Further Pettit finds that the change in slope results in an increase in the velocity while the slope of Y-T plot here, decreases after 0320. The contradiction could be removed if the difference in the coordinate systems used for measuring the positions of the knots is taken into account. Pettit's measures give the height above the chromosphere, measured along a radius, every time. A two coordinate system is used in this study and hence the Y coordinate is the projection of the radial distance on the Y axis. Consider the trajectory of a knot which rises up first almost radially and then turns off. In this case it is evident that Pettit's system of measurement would give larger increases in heights than the rectangular coordinate system. Therefore it seems that the abrupt change noticed is merely the result of the trajectory turning off from the original course and the X-Y plot clarifies the situation. But the existence of a turn-off point has to be explained. Since every part of the prominence shows this turn-off at the same interval of time, this might be associated with the time variation of the local configuration of the controlling agency. No accurate values of acceleration could be computed for instants later than 0315 and therefore, clues regarding the quantitative nature of the 'turn-off point' could not be obtained.

#### September 5, 1929 :

This prominence erupted on the west limb. It is seen as a prominence on August 25 on the east limb. The western tip is pointing to the leading half of a plage region without any spots. As the prominence crosses the disc it does not show any large changes in shape. It attains the sharpest outline on September 1. From September 2 onwards it becomes diffuse and fuzzy, and on September 4 the curved eastern tip is only very faintly connected to the rest of the prominence. On September 5, H $\alpha$  disc picture taken before the eruption shows the eastern tip still on disc. H $\alpha$  pictures of September 6, however, do not show any trace of it. Again, it is evident that the process of dissolution has set in earlier than the observed eruption.

In overall shape this prominence is similar to those of February 18, 1908 and December 31, 1920. This prominence has complicated ultrafine filament structure. At 0256 U.T. the prominence rises from L and M—Figure 7(a). The rise is more rapid later on. Around 0436 the connection with the chromosphere is identifiable, and the prominence gradually becomes diffuse. Nevertheless, the structure outlined by C, D, E, F persists right up to the last picture at 0505.

NOVEMBER 19, 1928.

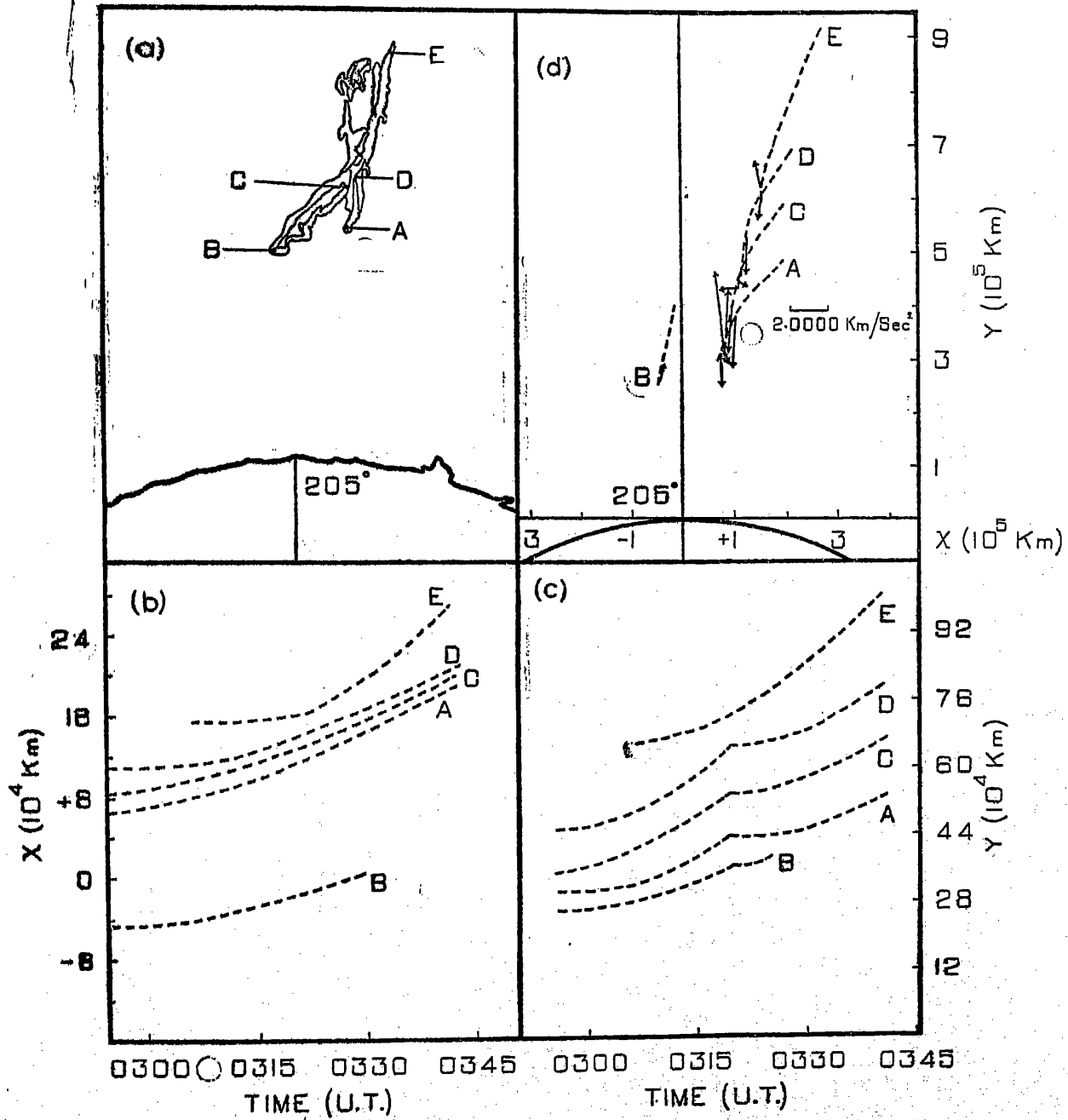


FIG. 8.

SEPTEMBER 5, 1929.

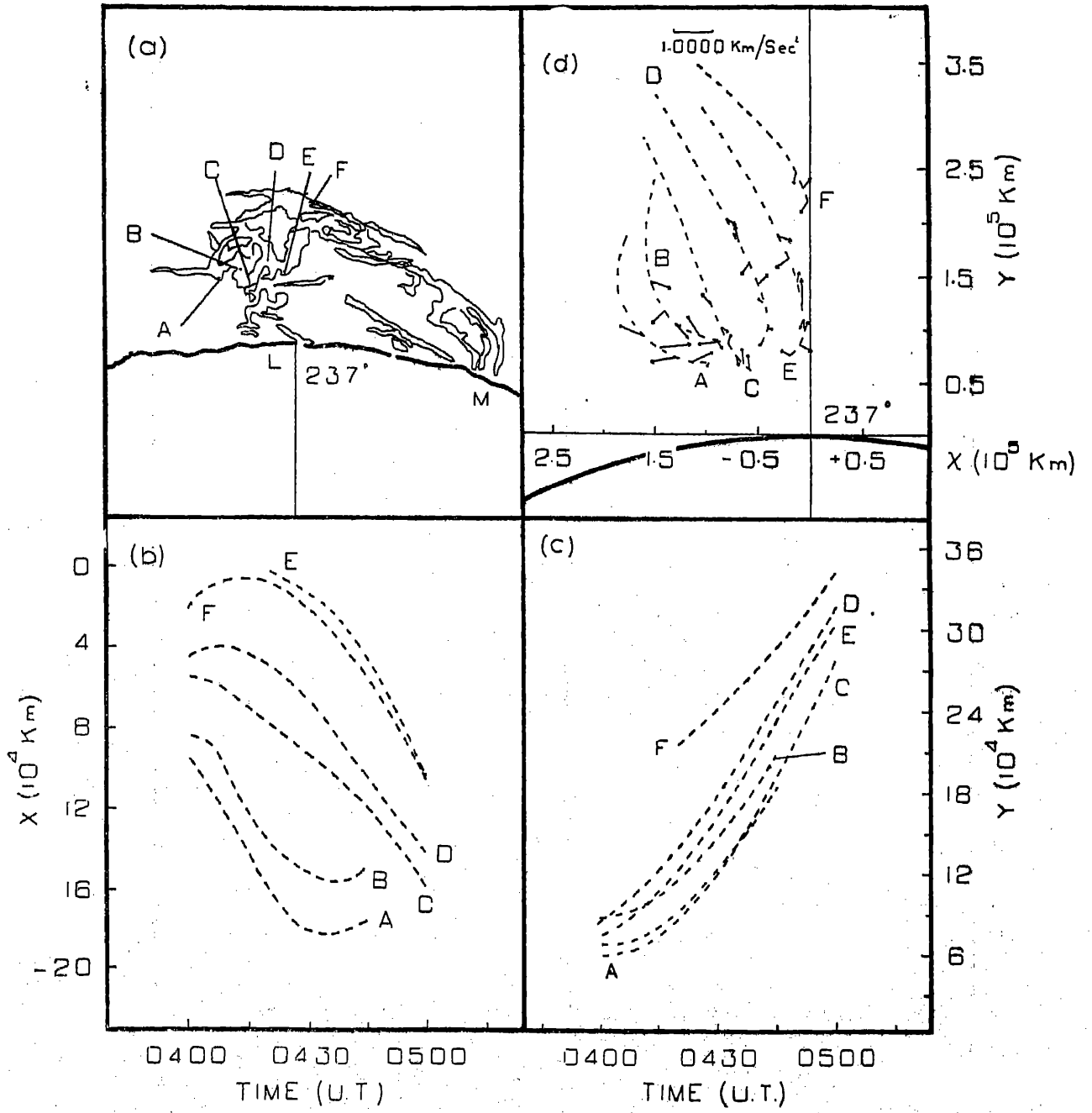


FIG. 7.

MAY 31, 1938.

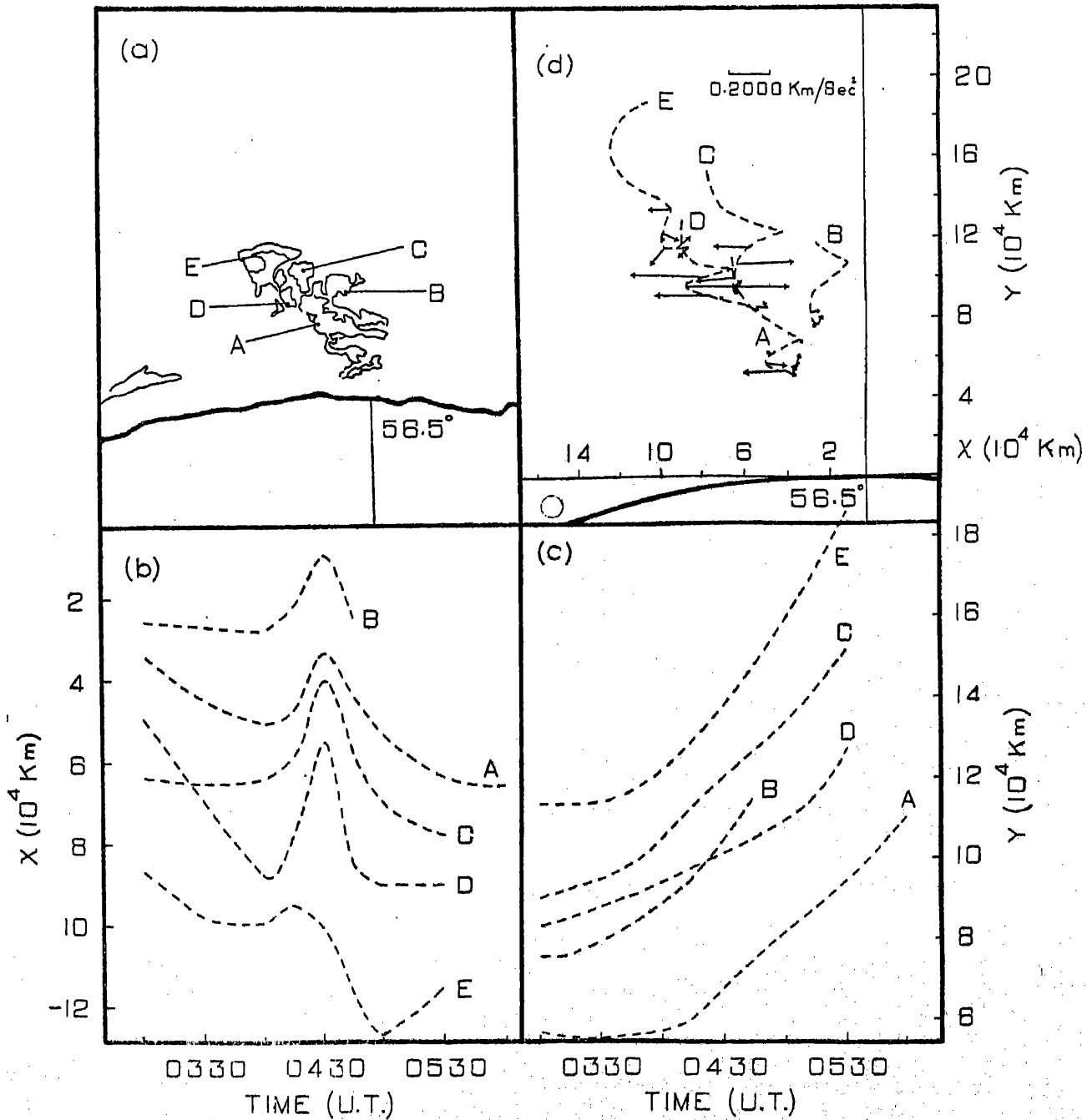


FIG. B.

The X-T plots—Figure 7(b)—for A and B are very similar, while those for C, D, E and F form another set of similar curves. The difference between the two sets is that the former shows an increase in X towards the later stage of the eruption, whereas for the latter X decreases steadily after about 0410.

In the Y—T graphs shown in Figure 7(c) the curves are similar. Only they tend to cross each other during the early stages.

X—Y plots in Figure 7(d) show the striking similarity in the overall motion upon which is superposed the equally striking range of curvatures for the individual trajectories. The curvatures of the trajectories change from being pronouncedly convex to the Y axis, to being moderately concave to it.

Here again, acceleration vectors, determined at 5 minute intervals, do not fall into any definite pattern. The characteristic feature of acceleration vectors here, as before, is their almost alternate reversal in direction. As for the magnitude of accelerations, the large accelerations of the order of 4 times solar gravity is attained by feature A.

The general character of the trajectories in the X-Y plane are similar to those of prominences of December 31, 1920, October 20, 1925, December 10, 1926 and November 19, 1928.

#### Prominence of May 31, 1939 :

The eruption of this prominence took place on the east limb. The prominence is to the east of a small plage region. There is no other detectable disc phenomenon related to this prominence.

At 0255 U.T. a small prominence approximately 110,000 Km high is seen projected beyond the limb. The prominence has several well defined compact knots with the material particularly concentrated near A, *vide* Figure 8(a). The whole prominence gives the impression of being tightly twisted near A. A long streamer from E streams into the chromosphere away from the direction of the plage region. Till 0438 the prominence shows no change in structure except a tendency to ascend slowly. After 0438, the rise is rapid. At 0539 the pattern defined by A, D, C, becomes less curved as it rises. The tightly knit impression of the original structure is lost during ascent. The orientation achieved by A, D, C at 0539 is preserved during the subsequent stages of eruption. It is interesting to note that the prominence structure from feature A and above rises up and dissolves in the background, while below A (*i.e.* 50,000 Km) the material arches down into the chromosphere.

X—T plots shown in Figure 8(b) are reasonably similar. The X coordinate seems to peak around 0430, for all the features.

The Y—T graphs, on the other hand, show a gradual increase with time.

The X—Y plots throw into relief an extremely interesting aspect of the eruption. Every feature studied shows unmistakable spiralling. The axes of the spirals are nearly parallel to each other and the pitch of the spiral is larger during the later phases of the eruption than at the start. Acceleration vectors drawn along the trajectories at 15 minute intervals display the usual alternation of direction. Also, many of these vectors are almost transverse to the direction of acceleration due to gravity.

The strong curvature displayed by the X—Y trajectories shows that this prominence should be considered as falling in the same class as prominences of February, 18, 1908 and March 14, 1927.

The above review of the history of the prominences and their neighbourhood, before and after the eruption, confirms that neither preferred locations nor particular types of surroundings are necessary for eruption. At least a qualitative analysis of surface details does not provide any clearcut clues.

Space-time plots show that there are large increases or decreases in distance in relatively short, but finite time intervals; rarely is there a real discontinuity, separating two uniform trajectories. As for Pettit's second law, there seems to be hardly any evidence in support of it.

The X—T, Y—T and X—Y plots clearly indicate that the fragments of the different parts of a prominence are all subject to strongly similar motions. This confirms Dodson's conclusion regarding the general overlying pattern that governs the eruption. It is very likely that the ordering agency is a magnetic field. Further, deviations from the general pattern, like the progressive change in curvature and orientation of the trajectories of the different features of a prominence, largely suggest the local configuration of the magnetic lines of force.

A comparison of the X—Y trajectories obtained in the present study for these eight different prominences show that, there are two general types of paths :

- (I) Strongly curved, short ones (Prominences of February 18, 1908, March 14, 1927 and May 31, 1939).
- (II) Slightly curved, long ones (Prominences of December 31, 1920, October 20, 1925, December 10, 1926, November 19, 1928 and September 5, 1929).

It is interesting to note that type I paths do not rise very high above the chromosphere while type II paths do (Prominence of November 19, 1928 rises to approximately 900,000 Km).

The resultant accelerations drawn along the trajectories at equal time intervals do not show any clearly discernible trends. The accelerations at the same instant of time for different features of the prominence show no well defined relation between each other. Again, when resultant accelerations in regions of constant X or Y are examined, no similarity either in the direction or magnitude of the acceleration vectors is noticeable.

The most evident feature revealed by the acceleration diagrams is that the acceleration vectors change their direction, often reversing their orientation alternately along the trajectories. This is fairly consistent with the results obtained by Rothschild et al., (1955) for an eruptive prominence studied by them. They have shown that accelerations have a tendency to reverse at a certain point on the trajectory. Since most of the observations of particular features in their analysis cover only 20 minutes, the time interval between reversals should be considerably less. This would appear to be borne out by the present computations wherein accelerations calculated for 5, 10 or 15 minute time intervals alternate in direction. It should be mentioned that this reversal of direction is common, in varying degrees, to all the prominences analysed, and is not confined to only one of the two types of trajectories mentioned above.

### Discussion

Investigations of the long enduring stability of prominences have shown that the magnetic fields are a necessary part of the stable configuration. Zirin (1961) has recently found that small fields in quiescent prominences are *enhanced* over ten-fold in active prominences. The d' Azambujas have shown that in two out of three cases of eruption a filament is rebuilt in the same place and with similar form after some days. This shows that the field configurations essential for filament formation withstand eruption and retain their form. Taking these findings together, it would seem that the extra energy required for the erupting prominence is provided by an enhancement of the existing magnetic field. It is proposed here that the magnetic fields involved in an erupting prominence consist of two

parts : viz. (i) a weak but primary field, responsible for the normal prominence configuration and (ii) a strong but momentary component. The former is restored, after eruption, to its original form without any significant change in characteristics.

Also, as noticed in some of the prominences studied herein, the process of dissolution affects the other parts of the prominences even earlier than the observed eruption, probably suggestive of the impending eruption. Even so the eruption is dramatically sudden.

It was stated earlier that among the prominences investigated herein, two general types of sky-plane component trajectories are deducible. These trajectories could be explained by considering the equilibrium between magnetic energy on the one hand, and, thermal and/or turbulent energies on the other. The quiescent phase of prominence life represents equilibrium between magnetic and thermal turbulent energies. In the active phase, the equilibrium is, perhaps, dynamic; the kinetic and magnetic energies still balancing each other. At every stage, the dissipation of magnetic energy by Joule heating, and gain in magnetic energy by the stretching of the magnetic lines of force, are operative. The Joule losses would occur through the transverse slipping, across the lines of force, by the neutral atoms, while the moving plasma would cause the stretching of the lines of force. At the critical stage the momentary increase in the magnetic field might cause one form of energy to increase at the expense of the other and thereby destroy the balance. When kinetic energy exceeds magnetic energy, the resulting eruption is characterised by the kinetic motion of the material dragging the lines of force along with it. Having regard to the large amount of magnetic energy available for conversion, prior to eruption, the matter would acquire tremendous gains in kinetic energy. Therefore, the eruption will be marked by high speed movements of material, condensed originally along the lines of force and now carrying the lines of force along. This process would ensure that the original bright structures are conserved in eruption. It would also lead to long, slightly curved trajectories referred to earlier. (Prominences of December 31, 1920, October 20, 1925, December 10, 1926, November 19, 1928 and September 5, 1929 would appear to fall in this category). Estimates of acceleration made for the prominences in question show that they are subject to large accelerations, several times solar gravity.

If the enhancement of the weak field by the momentary strong one, does not result in imparting super kinetic energies to the prominence material and the balance is in favour of magnetic energy, the resulting eruption would be dominated by the magnetic field. The prominence structures would be constrained in their motion by the lines of force and spiralling along lines of force would be the feature in such a case. The type I trajectories (Prominences of February 18, 1908, March 14, 1927 and May 31, 1939), described above seem to possess characteristics remarkably akin to those explained here. It would further account for the relatively small accelerations observed in these cases.

In conclusion the preliminary nature of the foregoing speculations must be pointed out. While they give a fairly qualitative idea of the post eruption trajectories obtained in this analysis, the root cause of the enhancement of the field itself remains to be considered. Again, the restoration of the weak field after eruption to its original form has to be dealt with. In respect of type II trajectories where the conversion of the extra magnetic energy into kinetic energy results in the material carrying away some lines of force, the restoration of the original field is a natural consequence. The restoring mechanism for type II trajectories is not so clear, as the decay times of the magnetic field are long.

To check whether field conditions propitious for the reformation of filaments are achieved, the examination of H $\alpha$  disc pictures of subsequent days (all three prominences in type I erupted on east limb) shows no sign of a new filament till the region in question reaches the west limb (approximately 13 days later). It is interesting to note that there are three prominences classified under type I to five under type II in approximately the same ratio obtained by the d' Azambujas for filaments that do not reappear to those that reappear, after a disappearance. It is tempting to generalise therefrom, that type I trajectories represent the class of eruptions which do not lead to the reappearance of the filament. But the near equality of the ratios referred to, could hardly be deemed more than a coincidence at the present stage.

Acknowledgements—It is a pleasure to record my indebtedness to Dr. M. K. V. Bappu for having suggested this study and for his valuable advice throughout the investigation. My grateful thanks are also due to Messrs. A. Bhatnagar and L. M. Punetha, for many helpful suggestions. This work was done during the tenure of a Senior Research Scholarship kindly awarded by the Ministry of Scientific Research and Cultural Affairs.

Kodaikanal Observatory,  
October, 1962.

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TABLE I

February 18, 1908

Time	P.A. of Origin	A				B				C				D				E			
		X	Y	Z	Y	X	Y	Z	Y	X	Y	Z	Y	X	Y	Z	Y	X	Y	Z	Y
0430	137°	-158	-20	-8	-6	-226	-2	+15	-13	-224	+26	-34	0	-302	+15	-47	-9	-290	+9	-15	+11
0500		-158	+4	-9	+2	-241	+3	+15	-10	-238	-26	-38	+8	-309	-17	-53	+3	-305	-4	-23	-3
0530		-166	+10	-11	+5	-256	-5	+15	+5	-241	+9	-38	-6	-315	+12	-62	-1	-317	-7	-23	+1
0600		-166	-11	-9	-5	-272	+9	+23	-7	-256	+5	-38	-3	-354	-1	-68	+4	-332	+8	-21	-2
0630		-166	+9	-8	+1	-283	-12	+26	-2	-260	+1	-42	+5	-328	-5	-72	-3	-347	-7	-19	+3
0700		-170	-10	-8	+6	-296	+15	+26	+4	-264	-9	-43	-5	-336	-1	-74	+2	-358	+8	-19	-1
0730		-170	+10	-6	-11	-298	+5	+30	0	-272	+2	-45	+1	-344	+11	-75	0	-370	-7	-19	+1
0800		-170	-1	-4	+7	-302	-43	+38	+6	-279	+22	-49	+4	-347	-16	-75	0	-377	+10	-19	-2
0830		-166	-3	-2	0	-309	+91	+45	-19	-283	-37	-51	-5	-351	+18	-75	-4	-385	-12	-19	-2
0900		-166	+0	+6	+4	-309	-94	+53	+26	-290	+28	-53	-9	-358	-19	-75	+10	-388	..	-19	..
0930		-166	+1	+11	-11	-294	+60	+62	-14	-302	-4	-55	+41	-362	+20	-75	..	-392	..	-15	..
1000		-162	..	+15	..	-302	..	+79	..	-294	..	-53	..	-370	..	-75	..	-392	..	-8	..
1030		-155	..	+21	..	-279	..	+91	..	-286	..	-49	..	-370	..	-75	..	-400	..	+8	..
1100		-143	..	+38	..	-277	..	+113	..	-270	..	-43	..	-370	..	-60	..	-415	..	+49	..
1130		-124	..	+64	..	-287	..	+151	..	-241	..	+11	..	-362	..	-25	..	-445	..	+91	..
1200		-83	..	+109	..	-309	..	+207	..	-211	..	+102	..	-370	..	+53	..	..	..	..	..

TABLE II

December 31, 1920

Time	P.A. of Origin	A			B			C			D		
		X	Y	Y'	X	Y	Y'	X	Y	Y'	X	Y	Y'
0240	264°	+241	+83	-74	+283	-17	+147	-226	..	..	+388	-40	-114
0250		+266	+106	+72	+294	-21	+181	+125	+139	+49	+388	+62	+22
0300		+285	+128	-46	+300	-13	+207	-12	+166	+27	+390	-29	-72
0310		+290	+155	+64	+302	+23	+241	-33	+189	+81	+394	+8	-129
0320		+281	+179	-68	+302	-21	+272	+37	+217	-146	+394	-23	+146
0330		+268	+204	+48	+300	-19	+302	-66	+247	+156	+392	+63	-111
0340		+249	+226	+11	+294	+9	+336	+148	+279	-211	+388	+76	+153
0350		+230	+253	-89	+287	..	+373	..	+321	+283	+385	-23	-114
0400		+207	+279	..	+277	..	+409	..	+363	..	+381	..	..
0410		+185	+307	..	+264	..	+453	..	+415	..	+370	..	..
0420		+157	+339	..	+247	..	+505	..	+468	..	+354	..	..
0430		+124	+370	..	+226	..	+558	..	+539	..	+339	..	..
0440		+83	+415	..	..	..	..	..	+617	..	+324	..	..

TABLE III

October 20, 1925

Time	P.A. of Origin	A			B			C			D			E		
		X	Y	Y'	X	Y	Y'	X	Y	Y'	X	Y	Y'	X	Y	Y'
0230	297°	+49	+156	+90	+47	+88	+123	-233	+74	-64	+129	+69	+151	+64	+38	-87
0240		+49	+150	+92	+42	+1	+128	+143	+79	+71	-122	+40	+166	+62	+105	+87
0250		+52	..	+102	+45	+31	+132	+18	+85	-51	+113	+38	+181	+66	-61	-1
0300		+64	..	+113	+51	+16	+151	+17	+94	..	..	+42	+196	+75	0	-43
0310		+75	..	+135	+60	-94	+172	-18	+104	..	..	+49	+300	+85	+170	+104
0320		+94	..	+158	+77	+168	+196	-11	+117	..	..	+64	+241	+100	-267	-38
0330		+113	..	+181	+109	..	+230	..	+132	..	..	+87	+279	+119	+290	..
0340		..	..	..	+158	..	+279	..	+153	..	..	+119	+317	+143	+328	..
0350		..	..	..	+207	..	+339	..	..	..	..	+162	+370	+192	+377	..
0400		..	..	..	+256	..	+400	..	..	..	..	+230	+422	+249	+437	..
0410		..	..	..	+309	..	+460	..	..	..	..	+308	+490	+321	+505	..

TABLE IV  
December 10, 1926

Time	P.A. of Origin	A			B			C			D			E		
		X	Y	Y	X	Y	Y	X	Y	Y	X	Y	Y	X	Y	Y
0250	200°	+1	+7	+42	+4	+72	+138	-224	-36	+181	-220	+34	-11	+26	+204	-70
0300		+4	+37	+83	+8	-10	+155	+238	+84	+200	+253	+36	-29	+32	+230	+158
0310		+9	-28	+101	+17	-13	+173	-87	-83	+219	+204	+37	+81	+40	+266	-89
0320		+17	+7	+128	+26	+33	+206	-1	+126	+249	+206	+49	-50	+53	+294	-54
0330		+25	+54	+158	+38	-6	+234	+6	-86	+275	-168	+64	+3	+66	+324	+99
0340		+34	-110	+189	+51	-43	+268	-22	+47	+309	+167	+79	-6	+83	+362	-9
0350		+43	+148	+226	+64	+115	+305	-1	-36	+339	-179	+92	-23	+102	+403	..
0400		+53	..	+264	+79	-109	+343	+28	+31	+377	-172	+108	+14	+121	+441	..
0410		+68	..	+309	+96	..	+383	..	..	+415	..	+124	..	+141	+481	..
0420		+83	..	+354	+111	..	+423	..	..	+460	..	+145	..	+166	+526	..
0430		+109	..	+403	+134	..	+460	..	..	+498	..	+168	..	+190	+569	..
0440		+143	..	+453	+158	..	+498	..	..	+534	..	+192	..	..	..	..
0450		..	..	..	+181	..	+535	..	..	+569	..	+219	..	..	..	..

TABLE V  
March 14, 1927

Time	P.A. of Origin	A			B			C			D			E			F		
		X	Y	Y	X	Y	Y	X	Y	Y	X	Y	Y	X	Y	Y	X	Y	Y
0350	40°	+143	+119	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
0400		+152	+106	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
0410		+170	+92	..	+199	+170	-169	+264	+174	+273	-142	+300	-131	+303	-57	..	..	..	..
0420		+152	+154	..	+192	+139	+173	+255	..	+241	..	+291	..	..	..	..	..	..	..
0430		+113	+112	..	+143	-98	+161	+240	..	+207	..	+272	..	..	..	..	..	..	..
0440		..	..	..	+98	..	+145	+202	..	+189	..	+240	..	..	..	..	..	..	..
0450		..	..	..	+53	..	+119	+149	..	+183	..	+204	..	..	..	..	..	..	..
0500		..	..	..	+21	..	+91	+77	..	+167	..	+158	..	..	..	..	..	..	..
0510		..	..	..	-2	..	+65	..	..	..	..	..	..	..	..	..	..	..	..
0520		..	..	..	-32	..	+41	..	..	..	..	..	..	..	..	..	..	..	..
0530		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
0540		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE VI  
November 19, 1928

Time	P.A. of Origin	A			B			C			D			E		
		A			B			C			D			E		
		X	Y	Y'	X	Y	Y'	X	Y	Y'	X	Y	Y'	X	Y	Y'
0300	205°5	+72	+294	+218	-45	+309	+985	+87	+132	-539	+109	+422	+42	..	..	..
0305		+77	+302	-1504	-42	..	..	+94	-75	-841	+111	+437	-174	..	..	..
0310		+87	+322	+3414	-36	..	..	+104	+127	+2116	+115	+475	-1868	+153	+590	-882
0315		+98	+358	-2612	-30	..	..	+113	-234	-1898	+126	+528	-1958	+155	+611	+1395
0320		+109	+398	..	-19	..	..	+124	..	..	+138	..	..	+158	+641	..
0325		+128	+392	..	-9	..	..	+138	..	..	+151	..	..	+173	+690	..
0330		+147	+407	..	..	..	..	+155	..	..	+166	..	..	+200	+739	..
0335		+162	+437	..	..	..	..	+170	..	..	+181	..	..	+226	+800	..
0340		+177	+475	..	..	..	..	+187	..	..	+196	..	..	+256	+875	..

TABLE VII  
September 5, 1929

Time	P.A. of Origin	A			B			C			D			E			F		
		A			B			C			D			E			F		
		X	Y	Y'	X	Y	Y'	X	Y	Y'	X	Y	Y'	X	Y	Y'	X	Y	Y'
0400	237°	-94	+332	+68	-83	+531	-8	-55	-45	+58	+142	-45	-66	+85	-82	-21	-128	+74	+110
0405		-109	+494	+68	-87	+126	-231	-57	-79	+60	+325	-40	+100	+98	-2	-9	+171	+83	-180
0410		-126	-684	+72	-104	-237	+451	-62	0	+64	+422	-40	-4	+119	-49	-6	+91	+94	+300
0415		-141	+749	+81	-121	+339	-353	-70	+17	+72	-116	-43	-128	+123	+51	-6	-99	+108	-205
0420		-158	-609	+92	-136	-309	-308	-77	+72	+87	+95	-49	+217	+140	+255	-8	-38	+124	+511
0425		-168	..	+108	-145	..	..	-85	+147	+102	-155	-57	-234	+160	-319	-13	+86	+141	+220
0430		-179	..	+124	-153	..	..	-92	-239	+121	+323	-66	-65	+181	+229	-21	-293	+162	-142
0435		-181	..	+141	-155	..	..	-100	+330	+143	-137	-79	+224	+200	-112	-30	+335	+185	-138
0440		-179	..	+162	-157	..	..	-109	..	+170	..	-91	..	+223	..	-42	..	+207	..
0445		-173	..	+185	-147	..	..	-119	..	+194	..	-102	..	+245	..	-53	..	+234	..
0450		..	..	..	..	..	..	-132	..	+221	..	-117	..	+270	..	-70	..	+258	..
0455		..	..	..	..	..	..	-143	..	+249	..	-132	..	+294	..	-87	..	+283	..
0500		..	..	..	..	..	..	-158	..	+279	..	-141	..	+310	..	-104	..	+305	..

TABLE VIII

May 31, 1939

Time	P.A. of Origin	A				B				C				D				E			
		X	Y	X̄	Ȳ	X	Y	X̄	Ȳ	X	Y	X̄	Ȳ	X	Y	X̄	Ȳ	X	Y	X̄	Ȳ
0300	56°5	-33	+57	-36	-27	-25	+75	+14	+37	-63	+91	+1	+4	-48	+83	-18	+30	-86	+113	-48	-33
0315		-39	+53	+16	+54	-26	+75	-4	-3	-65	+92	+17	-16	-59	+85	+61	-22	-92	+113	+65	+55
0330		-45	+53	+42	-26	-26	+81	+42	+10	-64	+94	+39	+19	-69	+89	-13	+9	-98	+113	-66	-77
0345		-48	+57	-156	-5	-27	+85	..	..	-63	+98	-188	-8	-79	+91	-236	0	-98	+117	+6	+86
0400		-50	+57	+107	-10	-27	+89	..	..	-63	+106	+286	+9	-88	+94	+494	-4	-99	+121	+81	-43
0415		-47	+60	-13	+12	-21	+94	..	..	-57	+113	-175	+7	-77	+98	-380	+14	-94	+132	-108	+1
0430		-32	+68	+3	-13	-8	+106	..	..	-39	+121	..	..	-54	+102	..	..	-100	+138	..	..
0445		-43	+75	..	..	-24	+115	..	..	-59	+127	..	..	-84	+106	..	..	-118	+147	..	..
0500		-53	+81	..	..	..	..	..	..	-69	+132	..	..	-89	+109	..	..	-124	+158	..	..
0515		-53	+87	..	..	..	..	..	..	-74	+141	..	..	-89	+116	..	..	-121	+170	..	..
0530		-63	+92	..	..	..	..	..	..	-77	+151	..	..	-89	+126	..	..	-115	+185	..	..
0545		-65	+102	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
0600		-65	+109	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..



ERRATA FOR KODAIKANAL OBSERVATORY BULLETIN NO. CLXIV

Part I.

Page.	Date	Column	for	ready
357	August 1960	3	152.2	152.1
	September	7	38.73	38.74
	October	3	143.4	142.4
	December	3	150.4	150.3
	3rd quarter	3	386.9	386.8
	4th quarter	3	390.0	388.9
	2nd half year	3	776.9	775.7
	July-December 1960	Total areas East	3696.5	369.7
		(Sq. minutes) West	4060.5	406.0
358	1960 August	4	50.05	05.05
361	1960 July-December	Total area East	594	3,71,250
		West	6760	4,22,500

## Part II

Page No.	Date/line	Column No.	for	read.
364	13	12	37.3	37.0
366	7	12	83.3	38.3
366	Mean ++	13	36.3	36.8
366	2	14	38.8	38.3
366	7	14	38.3	38.3
366	7	14	38.3	39.1
369	M	3	36.3	36.3
375	0	1	Hours	35.5
375	0	1	527	H.M.
376	0	1	54	623
377	0	1	695	514
378	0	1	383	528
380	0	1	497	549
381	0	1		
385	0	1		
385	0	1		
385	0	1		
385	0	1		
386	0	1		

Part III.  
(Ionospheric data)

Page No.	Date/line	Column/Hour	for	Read.
404	23	1030	10.0H	11.1H
	29	0430	3.9	2.4
405	21	1030	9.5	9.3
425	4	1430	10.0	10.0
	13	1330	2.0	3.0
426	13	1230	3.4	2.4
		0930, 1030 &	LM	LH
427	21	1130		



Page No.	Date/line	Column/Hour	for	read
466	13	06	1.1	2.1
488	7	0530	4.10	3.10
512	Count	0630	30	29
552	Count	0630	11	14
565	24	1830	V80	380
570	2	07	501	105
	Count	11	260	29
578	11	01	U11.80	U11.6
589	1 to 5	1230	3	A, 3.8, A
590	16	11	7.	7.8
	20	11	8.8	8.4
	22	11	G4	G
502	Count	-	Count	Mean
	Mean	-	Mean	Count
606	24	09	220	210
618	25	10	5.90	2.90
	29	11	5.60	2.60
634	3	11	9.8	9.0
638	Characteristic	-	foEs	fbEs
	Count	11	99	29
640	30	1030	483	4.3
641	Count	1230	2.7	27
652	5	0630	235	240
655	13	16	108	110
662	19	08	27	2.7
	21	08	2.05H	2.6
	Mean	02	2.25	3.2

# Kodaikanal Observatory

Bulletin No. CLXIV

Published on.....6 OCT 1964

## PART I

### *Summary of prominence observations for the Second Half of 1960*

The results of observations of prominences made at Kodaikanal Observatory during the second half of 1960 supplemented by data computed from photographs supplied by Mount Wilson and Meudon Observatories for those days on which Kodaikanal had imperfect or no observations are summarised in this Bulletin.

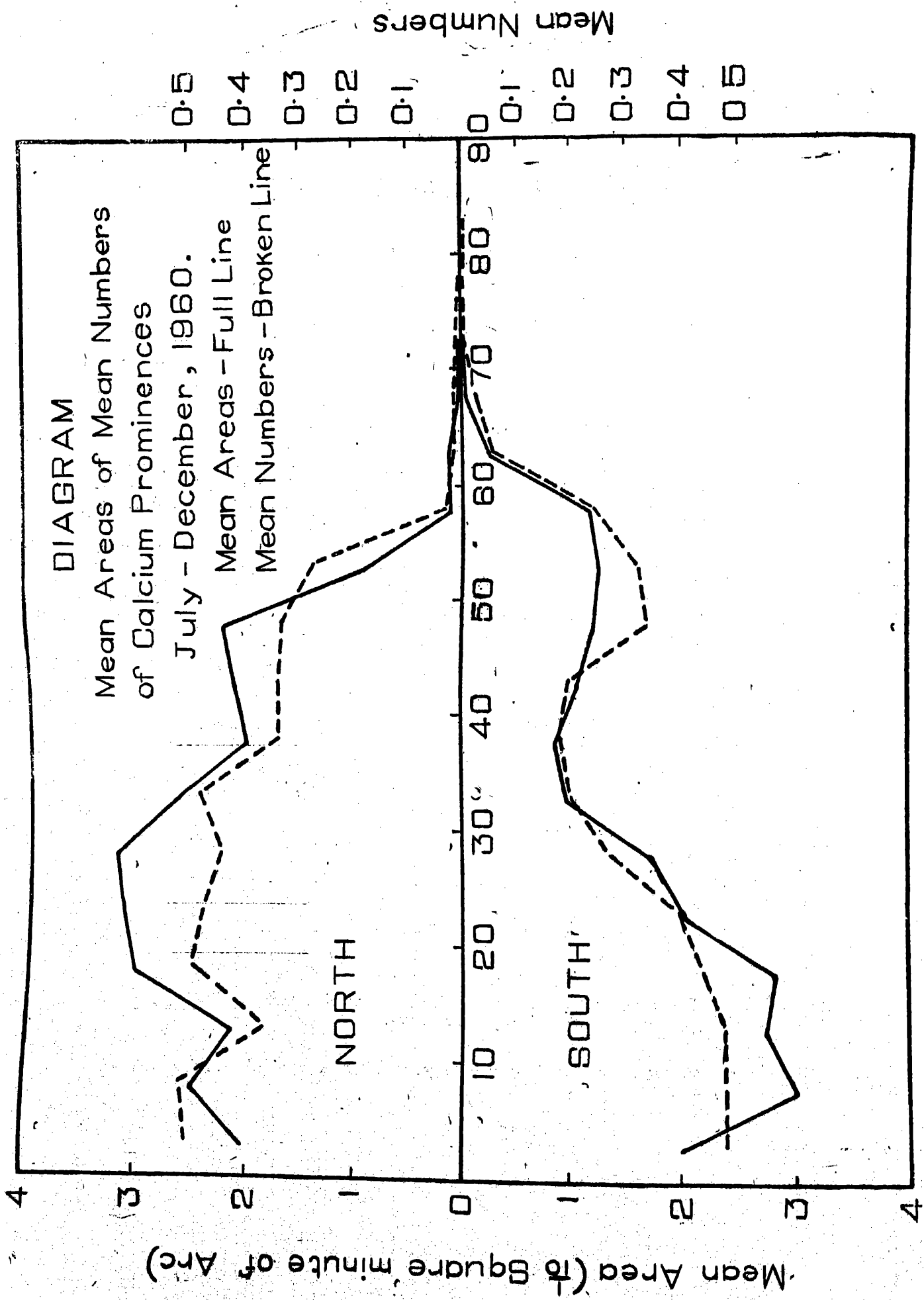
*Calcium prominences on the limb.*—During the half-year under review photographs of calcium prominences at the limb were obtained at Kodaikanal on 106 days which were counted as  $96\frac{1}{4}$  effective days after giving due weightage to the photographs according to their quality. Spectroheliograms for 62 days were obtained from Mount Wilson Observatory and for 56 days from Meudon Observatory. In all, complete observations were available for  $161\frac{1}{4}$  effective days.

The mean daily areas (in sq. minutes of arc) and the mean daily numbers of prominences derived from the above records are given below :

		Combined data	
		Mean daily areas (in sq. minutes of arc)	Mean daily numbers
North	.	2.67	4.65
South	.	2.14	4.14
Total	.	4.81	8.79

The figures, when compared with the corresponding values of the previous half-year show an increase of activity, the increase being 32.5% in areas and 25.03% in numbers.

The distribution of areas and numbers in five-degree ranges of latitude as obtained from the combined data is represented in diagram I.



The peak of activity in the northern hemisphere is centered in the latitude belt  $20^{\circ} - 30^{\circ}$ . In the southern hemisphere, the peak of activity is in the latitude belt  $5^{\circ} - 10^{\circ}$ .

The monthly, quarterly and half-yearly areas, numbers, heights and extents of prominences as derived from all available records are tabulated below :

1960 months	No. of effective days	Area (sq. minutes)	Numbers	Daily means		Mean height	Mean Extent
				Area (sq. minutes)	Numbers		
1	2	3	4	5	6	7	8
July . . . . .	28	139.0	226	4.96	8.14	54.01	3.95
August . . . . .	29½	152.2	297	5.12	9.98	50.10	3.16
September . . . . .	27½	95.7	238	3.51	8.74	38.73	2.84
October . . . . .	27	143.4	261	5.31	9.67	49.71	3.59
November . . . . .	22	96.2	157	4.38	7.13	46.40	3.72
December . . . . .	27½	150.4	239	5.52	8.77	49.50	4.16
3rd quarter . . . . .	85	386.9	761	4.53	8.95	47.62	3.32
4th quarter . . . . .	76½	390.0	657	5.07	8.52	48.54	3.82
2nd half-year . . . . .	161½	776.9	1418	4.80	8.73	48.08	3.57

The distribution of prominences about the sun's axis of rotation is given below :

1960 July—December

	East	West	Percentage East
Total areas (sq. minutes) . . . . .	3696.5	4060.5	47.6
Total numbers . . . . .	657.0	761.0	46.3

#### Observations with the Hale Spectrohelioscope

Details of Doppler displacements in H-alpha line observed in prominences and dark markings are given below :

	North	South	East	West	Displacements To red & violet
1	2	3	4	5	6
Displacements in prominences . . . . .	14	8	7	15	22
Displacements in dark-markings . . . . .	2	1	2	1	3

## Solar Flares

Details of solar flares observed during the period are given in the following table :—

Date 1960	Time in U.T.			Mean Latitude	Mean Longitude from central meridian	Importance	Maximum width of H- alpha line observed A°
	Beg. H. M.	Max. H. M.	End. H. M.				
1	2	3	4	5	6	7	8
July 20	*05 30	..	**05 40	20° N	48° W	1	1.80A°
August 8	*05 00	05 00	50 05	22° N	70° E	2	1.28
11	02 47	03 04	03 15	21° N	33° E	2	2.08
14	*05 35	05 40	**05 47	20° N	13° W	3	1.80
15	*05 25	05 25	05 40	19° N	25° W	1	1.68
September 2	*02 50	02 50	03 05	14° S	54° W	2	1.76
October 11	*05 34	05 41	06 30	13° S	35° W	2	..
December 30	03 52	04 06	04 15	15° N	23° E	3	1.88

\*First observation of flare and not the beginning of flare.

\*\*Last observation of flare and not the end of flare.

## Surges, Active Prominences etc.

Details of surges and active prominences observed are given below :

Date 1960	Phenomenon	Importance	Time in U.T.		Position (Heliographic)		Direction of outflow	Remarks
			Beg.	End.	Latitude	Longitude		
19-8-1960	APR	2	04 05	08 44	08° S	90° E	r	K
29-8-1960	BSL	1	05 50	06 25	07° S	90° W	r	
3-9-1960	BSL	2	02 10	05 50	18° N	90° W	rN	Displaced to red 1.6A° and to violet 1.92A at 0525 U.T.
19-11-1960	BSL	1	02 52	03 03	26° N	90° W	r	
19-11-1960	APR	1	05 10	09 00	62° N	90° W	r	J
27-11-1960	APR	2	05 41	06 30	28° N	90° W	r	L
30-12-1960	APR	1	02 50	06 02	15° S	90° E	r	K

Code :

BSL=Bright surge at limb.

APR=Active prominence region.

*Sudden disappearances*

Details of sudden disappearances of prominences and dark-markings are given in the following table:

1960 Date and Phenomenon	Time when object last ob- served before activa- tion U.T.	Time when disin- tegra- tion first obser- ved U.T.	Time when object has dis- appea- red U.T.	Approximate Position of Centre		Greatest exten- sion of promi- nence	Import- tance	Remarks
				Lat.	Long.			
September 4 Prominence . . . . .	02 30	..	05 20	17° N	90° W	10°	1	Most of the pro- minence dis- appeared by 05 20 hrs.
November 30 Prominence . . . . .	03 13	..	05 04	19° N	90° W	7°	1	Most of the pro- minence disappeared by 05 04 hrs.
December 11 Prominence . . . . .	03 05	..	03 11	51° N	90° W	8°	1	Prominence dis- appeared bet- ween 03 05 hrs. and 03 11 hrs.

*Prominences projected on the disc as absorption markings*

During the half-year under review photographs of the sun's disc in H-alpha line were obtained at Kodai-kanal on 98 days. Spectroheliograms for 65 days were obtained from Mount Wilson Observatory and for 59 days from Meudon Observatory. On the whole records were available for 148 effective days.

The mean daily areas in millionths of the sun's visible hemisphere (uncorrected for foreshortening) and the mean daily numbers of the H-alpha dark-markings as derived from the combined photographs are given below :—

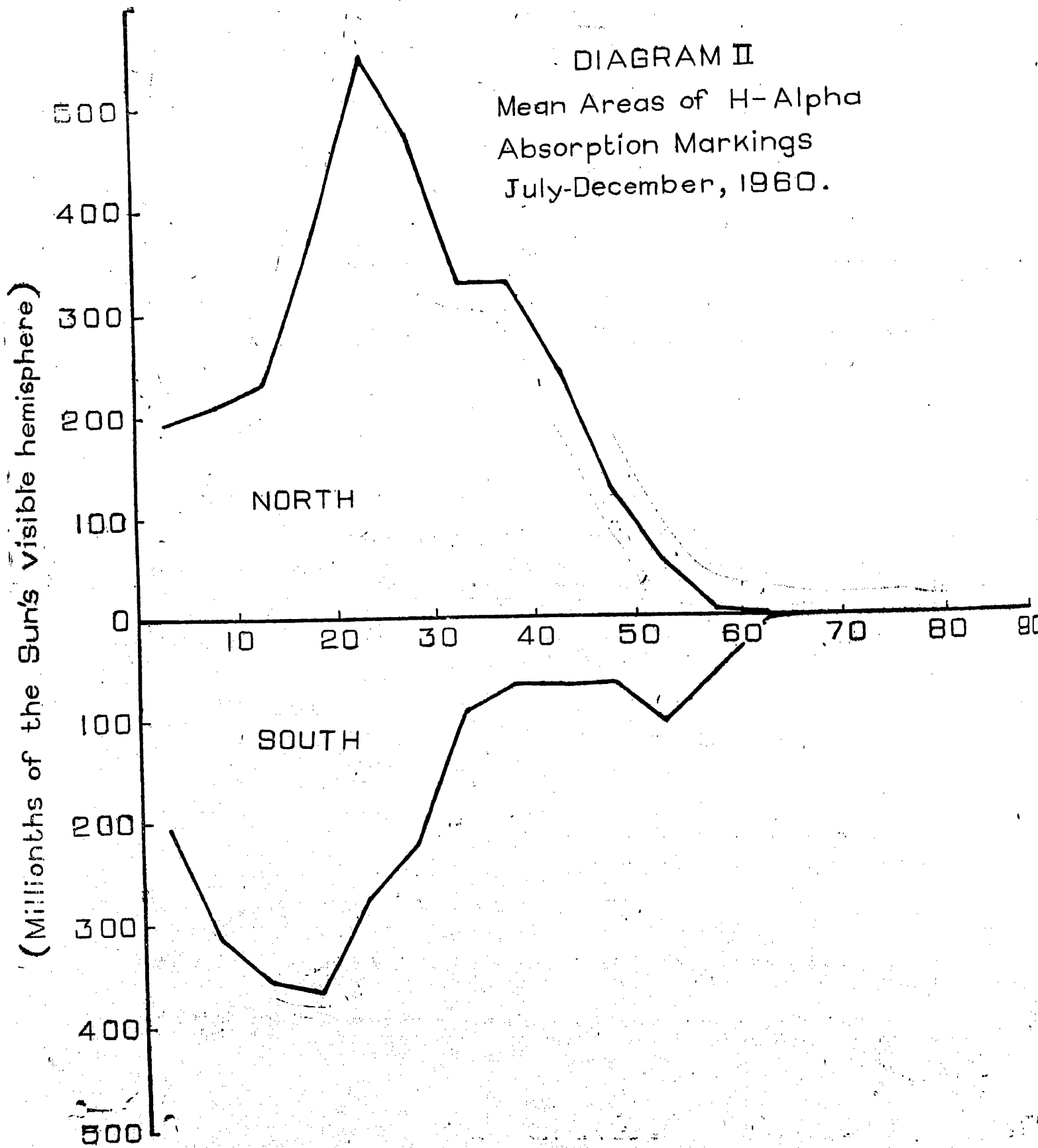
Combined data		
	Mean daily area (millionths of the sun's visible hemisphere)	Mean daily number
North . . . . .	3088	18.71
South . . . . .	2246	13.23
TOTAL . . . . .	5334	31.94

On comparing with the previous half-year's values, these figures show an increase in activity in areas, the increase being 8.6% and a slight decrease in activity in numbers, the decrease being 2.2%.

The distribution of the areas of the absorption markings in 5 degree ranges of latitude as obtained from the combined data is shown in diagram II. The zone of maximum activity in the northern hemisphere is in the latitude belt 20°-30° and in the southern hemisphere in the latitude belt 10°-20°.

## DIAGRAM II

Mean Areas of H-Alpha  
Absorption Markings  
July-December, 1960.



The distribution of total areas and numbers of the dark-markings east and west of the sun's axis of rotation is given below :

*July—December 1960*

	Combined data		
	East	West	Percentage East
Total area (millionths of the sun's visible hemisphere) . . . . .	5940	6760	46.8
Total numbers . . . . .	2583	2345	52.4

The areas show a slight eastern deficit whereas there is a slight eastern excess in the numbers.

*Summary of calcium flocculus observations*

During the half-year under review, calcium flocculus photographs were obtained at Kodaikanal on 121 days. Spectroheliograms for 53 days were obtained from Mount Wilson Observatory and for 56 days from Meudon Observatory. On the whole, records were available for 165½ effective days.

The distribution of the areas of calcium flocculus east and west of the sun's axis of rotation is given below :—

*July—December, 1960*

	Combined data		
	East	West	Percentage East
Total area (in millionths of the sun's visible hemisphere uncorrected for foreshortening)	12,92,187	13,91,000	48.1

The mean daily area in millionths of the sun's visible hemisphere (uncorrected for foreshortening) of the calcium flocculi as derived from the combined photographs is given below :—

	North	South	Total
Mean daily area (millionths of the sun's visible hemisphere) . . . . .	10,329	5,856	16,185

Compared to the previous half-year there is a decrease in activity, the decrease being 32.3%.

Thanks are due to the co-operating observatories for the photographs supplied by them.



## PART II

*Magnetic observations for the second half of 1960*

Brief descriptions of the absolute instruments, the variometers and the system of observations are available in Bulletins Nos. CXXXII and CXXXVI of this observatory. The data given in this Bulletin are derived mainly from the records of La Cour instruments, but in case of failure of La Cour records, Watson magnetograms have been used.

The adopted values of the scale coefficients for the Horizontal Force, Vertical Force and Declination magnetographs for the second half of 1960 were 28 $\gamma$ /Cm., 120 $\gamma$ /Cm. and 14'/Cm. respectively.

## PART III

*Ionospheric Observations for the second half of 1960*

A description of the system of ionospheric observations at Kodaikanal with a brief description of the Ionosphere Recorder has been given in Bulletin No. 146 of this observatory. The present Bulletin contains half-hourly values of eleven ionospheric parameters *viz.*, foF<sub>2</sub>, foF<sub>1</sub>, foE, foEs, fbEs, f-min, h'F<sub>2</sub>, h'F, h'E, h'Es and (M<sub>3000</sub>)F<sub>2</sub> with symbols and terminology as recommended by the Special Committee on Worldwide Ionospheric Soundings to the URSI/AGI in its First Report (Brussels, September 2, 1956).

**Kodaikanal Observatory.**

March, 1963.

M. K. VAINU BAPPU,

*Director.*

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**MAGNETIC DATA**

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TABLE 1

## Hourly values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : July

2° plus tabular quantities

Date	Hours G.M.T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1	37.9	36.6	36.0	36.4	37.1	38.4	39.5	40.6	40.1	39.6	39.4	38.2	38.2	38.0	38.2
2	38.2	38.0	36.7	36.6	36.8	38.1	39.4	39.6	39.6	39.4	38.7	38.0	37.1	38.0	38.4
3	38.2	38.1	37.1	37.0	36.6	37.1	38.2	39.2	39.6	39.5	38.0	37.1	36.8	37.0	37.8
4	37.7	36.6	35.6	35.7	36.7	37.8	38.9	39.5	39.7	39.6	39.0	38.6	38.1	36.9	37.2
5	37.1	36.5	35.8	35.7	36.4	37.8	38.9	39.6	39.9	39.6	38.6	38.1	37.4	36.8	36.9
6	37.8	36.9	36.8	36.8	37.8	39.2	39.9	39.7	39.3	39.3	38.1	37.1	36.8	36.5	36.9
7†	36.8	36.4	35.8	36.6	37.3	38.4	39.4	39.4	39.6	39.7	38.4	37.9	37.0	37.0	37.9
8†	37.2	36.6	36.5	36.9	38.2	39.3	39.7	39.8	39.8	38.7	37.9	37.0	37.3	37.3	37.9
9†	36.9	36.2	35.9	36.5	37.2	38.6	39.8	41.5	41.2	40.1	38.9	38.2	37.7	37.6	38.3
10	37.0	36.8	36.8	36.9	37.3	39.0	39.8	39.9	39.4	38.7	38.4	38.3	38.1	38.1	38.1
11	37.0	36.6	35.9	36.7	38.4	39.8	40.8	41.8	40.9	39.8	38.5	37.3	37.1	37.0	37.6
12	37.0	35.7	35.5	36.1	37.1	38.4	38.6	39.3	38.9	38.6	38.2	37.1	36.8	36.5	37.2
13	37.1	36.0	35.6	35.7	36.4	38.1	38.6	39.8	39.9	39.2	38.4	37.8	37.3	37.0	37.2
14††	37.2	36.7	36.8	36.1	37.0	37.9	38.6	39.8	40.0	39.6	38.2	37.1	36.8	36.7	36.8
15††	37.0	36.4	36.1	36.9	37.8	38.5	38.7	39.7	39.3	38.6	37.1	36.8	35.8	34.3	34.4
16††	34.7	33.0	32.7	33.7	34.4	35.9	36.5	37.1	37.2	37.2	38.2	38.3	35.7	34.5	35.2
17	36.5	35.5	34.4	34.5	35.8	37.3	38.6	38.6	38.6	38.2	38.0	37.3	36.9	36.4	36.8
18	35.9	34.7	34.4	34.5	35.8	38.3	40.0	40.7	41.1	40.8	40.1	38.8	38.3	37.4	37.6
19††	36.5	35.9	35.9	36.0	36.9	37.4	38.0	39.1	38.8	38.6	37.3	36.0	35.9	36.5	37.3
20	35.8	35.8	34.6	35.9	37.6	39.8	41.1	41.4	40.4	39.4	38.7	38.7	37.4	37.3	38.0
21	37.2	35.8	36.3	35.8	37.2	37.9	39.6	40.3	40.1	40.6	40.1	39.3	38.6	38.5	38.6
22	37.2	36.2	35.8	36.5	38.3	39.3	39.7	39.9	39.7	38.7	38.0	37.6	38.2	38.5	38.7
23	37.2	36.8	36.5	37.1	38.3	39.6	40.7	41.3	40.8	40.0	38.9	37.9	37.9	38.0	38.6
24	37.8	37.1	36.4	36.6	37.2	38.5	38.7	40.0	40.0	39.3	38.6	37.9	38.0	38.6	38.7
25†	37.9	36.9	36.4	37.0	38.5	39.8	41.0	41.4	41.0	40.6	40.5	39.6	38.5	38.4	38.6
26	37.7	36.7	36.8	37.1	37.8	39.2	39.6	39.6	41.3	41.0	39.3	38.4	38.1	37.5	38.4
27†	37.7	37.0	36.3	36.7	37.2	38.2	39.2	39.8	40.6	40.9	39.9	38.6	38.4	38.5	39.2
28	38.1	37.2	37.1	38.2	39.1	39.5	39.9	40.2	40.9	41.4	41.3	39.9	39.1	38.5	39.3
29	38.4	37.1	36.4	36.6	37.0	37.6	37.8	39.0	39.7	39.7	39.1	39.0	39.0	39.0	39.1
30	38.4	37.1	36.9	37.4	38.3	39.0	39.8	40.5	40.8	40.9	39.8	39.2	38.0	37.8	38.5
31††	38.4	37.8	36.7	37.0	38.0	39.7	40.2	39.8	39.8	39.2	38.7	38.3	38.3	38.0	38.4
Mean	37.3	36.5	36.0	36.4	37.3	38.5	39.3	39.9	39.9	39.6	38.8	38.0	37.6	37.4	37.8
Mean†	37.3	36.6	36.2	36.7	37.7	38.9	39.8	40.4	40.4	40.0	39.1	38.3	37.8	37.8	38.4
Mean††	36.8	36.0	35.6	35.9	36.8	37.9	38.4	39.1	39.0	38.6	37.9	37.3	36.5	36.0	36.4

†Five international quiet days.

††Five international disturbed days.

ΔLoss of record ; day omitted for means.

TABLE 1

## Hourly values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : July

2° plus tabular quantities

Hours G.M.T.										Maximum		Minimum		Date
										Mean		Range		
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	
										H.	M.	H.	M.	
38.1	38.2	38.8	39.1	39.1	38.9	38.5	38.7	38.8	38.4	07	40	02	30	1
39.1	38.9	38.5	38.7	38.8	38.7	38.9	38.7	38.2	38.4	07	13	03	15	2
38.1	38.1	38.1	38.1	38.0	37.7	37.4	38.0	38.0	37.9	08	00	04	00	3
37.5	37.8	37.5	37.5	37.4	37.8	37.6	37.4	37.2	37.7	07	13	02	20	4
37.8	37.8	37.8	37.8	37.8	37.6	37.5	37.9	38.1	37.7	07	15	03	00	5
37.8	37.8	37.8	37.8	37.8	37.8	37.5	37.5	37.4	37.8	06	25	13	00	6
38.0	38.2	38.2	38.0	37.9	37.9	37.9	37.9	37.5	37.9	09	00	02	00	7†
38.2	38.2	38.0	38.0	37.9	37.6	37.6	37.5	37.2	37.9	07	40	01	35	8†
38.4	38.4	38.2	38.0	37.7	37.6	37.6	37.6	37.3	38.1	07	25	02	20	9†
38.3	38.4	38.3	38.1	38.1	37.8	37.3	37.1	37.0	38.0	06	35	01	30	10
38.1	38.3	38.3	38.0	37.7	37.7	37.3	37.1	37.1	38.1	07	00	02	00	11
37.4	37.8	37.4	37.5	37.4	37.2	37.2	37.5	37.1	37.4	07	00	02	15	12
37.5	37.8	37.5	37.7	37.5	37.7	37.7	37.7	37.4	37.6	08	00	02	23	13
37.2	37.2	37.2	36.8	37.0	37.2	37.0	36.4	36.8	37.4	07	35	02	15	14††
34.5	34.5	35.4	35.7	35.8	35.8	35.9	37.2	35.7	36.6	07	00	02	50	15††
35.8	35.7	35.8	35.8	36.4	36.6	36.5	36.2	36.5	35.8	10	00	01	15	16††
36.9	36.9	36.6	36.8	36.8	36.9	36.9	36.9	35.9	36.8	08	00	02	15	17
37.3	37.4	37.3	37.3	37.3	37.2	37.3	37.3	36.9	37.7	08	07	02	30	18
37.3	37.3	37.0	36.7	37.0	37.3	37.0	36.5	36.5	37.0	07	15	11	23	19††
38.1	38.1	38.3	38.0	38.0	37.3	37.3	37.3	37.3	38.0	07	12	02	00	20
38.7	38.6	38.5	38.3	38.2	38.0	37.9	37.6	37.6	38.3	09	30	01	35	21
39.0	38.9	38.7	38.6	38.2	37.9	37.6	37.6	37.6	38.2	07	00	02	00	22
38.7	38.7	38.6	38.5	38.3	38.2	38.0	38.0	37.9	38.5	07	00	01	45	23
39.2	39.0	38.6	38.5	38.2	37.9	37.6	37.6	37.9	38.2	08	05	02	00	24
39.1	38.9	38.6	38.5	38.1	37.8	37.8	38.1	38.1	38.8	07	00	02	00	25†
38.9	39.1	39.1	38.6	38.6	38.5	38.6	38.8	38.2	38.6	08	00	01	25	26
39.2	39.2	38.8	38.6	38.5	38.5	38.5	38.5	38.4	38.6	09	00	01	35	27†
39.9	39.9	39.9	39.6	39.1	38.5	38.4	38.4	38.4	39.4	09	15	01	35	28
39.1	39.0	38.7	38.3	38.3	38.0	38.0	38.1	38.3	38.3	08	02	01	25	29
39.1	38.8	39.0	38.5	39.1	38.8	38.8	38.7	38.5	38.8	09	00	01	35	30
38.4	38.5	38.4	38.8	38.5	38.5	38.4	38.4	38.4	38.5	05	52	02	08	31††
38.1	38.1	38.0	37.9	37.9	37.8	37.7	37.7	37.6	38.0			4.8		Mean
38.6	38.6	38.4	38.2	38.0	37.9	37.9	37.9	37.7					Mean†	
36.6	36.6	36.8	36.8	36.9	37.1	37.0	36.9	36.8					Mean††	

†Five international quiet days.

††Five international disturbed days.

Δ Loss of record ; day omitted for means.

TABLE 2

Hourly values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : August

2° pl s tabular quantities

Date	Hours G.M.T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1	38.4	38.1	37.8	38.4	38.5	39.2	39.8	40.6	40.9	40.8	40.4	38.7	38.7	38.3	38.1
2	38.7	38.4	38.0	38.3	38.5	39.2	39.9	40.9	40.5	40.2	40.4	39.7	39.0	38.3	38.8
3	38.7	38.3	37.7	38.4	39.0	39.8	40.8	41.2	41.2	41.2	39.9	38.8	38.3	38.3	38.7
4†	38.5	38.1	37.4	38.3	38.5	39.8	40.9	41.8	41.3	41.1	39.9	39.4	38.5	38.4	38.8
5†	38.4	37.7	37.0	37.0	38.2	39.3	39.7	39.8	39.8	39.1	38.4	38.0	37.7	38.2	38.6
6	38.4	38.0	37.7	38.3	39.0	40.4	41.2	41.1	40.0	39.7	38.3	38.2	37.7	38.2	38.9
7	38.3	37.5	36.9	37.3	38.3	39.7	40.1	40.5	41.1	40.3	39.7	39.0	38.3	38.4	38.1
8	38.4	37.6	37.0	37.2	38.2	38.4	41.1	42.1	41.5	40.7	39.7	38.7	38.6	38.3	38.4
9	38.3	36.8	35.6	36.3	37.7	39.4	39.4	38.4	38.2	38.6	38.9	37.2	36.5	37.7	38.4
10	38.0	36.8	35.8	36.6	38.2	40.4	42.1	41.9	41.1	39.8	39.7	38.4	38.9	38.6	38.7
11	38.2	37.0	36.8	36.9	37.3	37.5	38.9	40.0	40.3	40.3	39.6	38.2	37.0	37.5	38.4
12	38.4	37.9	37.0	37.5	39.6	41.1	41.3	41.0	40.3	39.6	39.5	38.8	37.9	37.6	38.2
13	38.5	37.6	36.9	37.5	38.2	39.5	40.3	41.1	41.7	41.6	41.0	39.9	39.3	38.2	37.6
14	38.2	37.1	36.9	37.8	39.4	41.0	41.7	41.5	41.0	40.6	39.8	39.2	38.5	38.2	38.0
15	38.7	38.0	36.8	37.1	38.1	39.6	41.0	41.9	41.6	40.2	38.9	38.2	38.1	38.0	38.1
16††	38.2	38.0	37.5	38.0	39.1	40.4	41.4	41.2	40.7	40.4	39.4	38.1	38.0	38.0	37.9
17††	36.6	34.5	34.1	33.5	34.9	36.0	37.3	39.3	38.1	37.9	38.8	37.7	36.5	36.7	38.3
18	36.5	35.1	35.1	36.4	37.9	39.4	40.8	41.3	40.8	39.6	38.0	37.8	36.8	36.6	37.6
19	37.3	36.2	35.4	36.4	37.6	38.6	39.3	40.8	40.1	39.0	37.9	37.8	37.9	38.3	38.6
20	37.8	35.8	35.2	36.8	38.9	40.6	40.5	40.6	39.5	39.1	37.7	37.0	36.7	37.5	37.8
21††	36.4	35.3	35.0	36.4	37.7	38.9	40.5	41.9	41.4	39.5	38.9	38.4	37.8	37.7	37.8
22	37.0	34.9	34.4	36.0	37.6	39.2	40.5	40.9	40.5	39.8	39.1	38.3	37.7	37.6	37.7
23	37.6	36.7	36.3	37.3	38.8	40.5	42.0	43.2	42.2	41.3	39.7	38.4	37.7	38.0	38.5
24†	37.7	36.3	35.3	35.9	38.6	41.5	43.1	42.9	42.1	41.2	39.4	38.2	37.9	38.0	38.4
25†	37.6	36.1	35.1	36.1	39.0	41.4	42.8	43.3	42.4	40.8	39.0	37.6	37.2	37.7	38.3
26†	37.6	36.6	36.1	35.7	37.1	40.0	41.7	43.5	43.8	43.0	41.1	39.0	38.2	38.1	38.5
27	37.4	36.7	36.0	36.0	37.6	40.3	42.5	43.0	42.7	42.4	40.4	38.6	37.6	37.8	38.1
28	36.9	36.1	35.5	35.7	36.6	38.5	40.1	41.3	41.0	40.1	38.8	37.7	37.3	37.0	37.7
29††	37.4	37.0	36.1	37.0	38.7	39.5	38.8	38.4	38.2	37.7	37.5	37.1	36.6	37.0	37.3
30††	37.4	36.0	35.4	35.8	37.2	37.3	37.6	37.3	37.3	37.3	36.6	35.2	35.2	34.6	34.6
31	36.6	35.8	35.3	35.9	37.2	38.6	40.1	40.8	40.1	37.9	36.5	36.0	35.9	36.2	36.5
Mean	37.8	36.8	36.2	36.8	38.1	39.5	40.6	41.0	40.7	40.1	39.1	38.2	37.7	37.7	38.0
Mean†	38.0	37.0	36.2	36.6	38.3	40.4	41.6	42.3	41.9	41.2	39.6	38.4	37.9	38.1	38.5
Mean††	37.2	36.2	35.6	36.1	37.5	38.4	39.1	39.6	39.1	38.6	38.2	37.3	36.8	36.3	37.2

†Five international quiet days.

††Five international disturbed days.

ΔLoss of record; day omitted for means.

TABLE 2

Hourly values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : Aug st

2° plus tabular quantities

Hours G.M.T.									Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23	Mean					
									Time	Mag.	Time	Mag.		
									H. M.		H. M.			
38.4	38.7	39.0	38.7	38.7	38.5	38.5	38.7	39.0	39.0	08 00	40.9	01 15	37.6	3.3
38.5	39.0	39.1	39.0	38.5	38.4	38.5	38.7	38.7	39.0	07 00	40.9	01 56	37.8	3.1
39.1	39.4	39.5	39.2	39.2	39.0	39.0	38.7	38.5	39.2	07 15	41.3	02 00	37.7	3.6
39.0	39.1	39.2	39.2	39.0	38.7	38.7	38.5	38.5	39.2	07 00	41.9	02 00	37.4	4.5
39.1	39.3	39.1	39.0	38.9	38.9	38.9	38.9	39.0	38.7	05 50	40.0	02 00	36.9	3.1
39.1	39.6	39.1	39.0	38.9	38.7	38.7	38.3	38.3	39.0	06 00	41.2	01 15	37.6	3.6
39.6	39.6	39.6	39.4	39.1	38.7	38.7	38.7	38.7	39.0	07 40	41.2	02 00	36.9	4.3
38.9	38.4	38.3	38.4	38.3	38.3	38.4	38.7	38.4	38.8	07 10	42.2	01 45	36.9	5.3
38.4	38.4	38.3	38.4	38.3	38.4	38.3	38.2	38.2	38.0	05 30	39.6	02 00	35.5	4.1
39.3	39.1	39.0	38.6	38.4	38.4	38.6	38.4	38.3	38.9	05 54	42.2	02 00	35.6	6.6
38.3	38.9	39.1	39.3	39.3	39.0	38.7	38.6	38.4	38.4	07 25	40.5	02 52	36.3	4.2
38.5	38.6	38.9	38.6	38.5	38.8	38.6	38.5	38.3	38.9	06 36	41.7	02 00	36.9	4.8
38.1	38.2	38.3	38.5	38.5	38.3	38.2	38.3	38.3	38.9	08 00	41.7	02 00	36.9	4.8
38.2	38.9	38.9	39.2	38.9	38.7	39.2	38.5	38.5	39.1	05 25	42.9	01 45	36.8	6.1
38.2	38.4	38.5	38.7	38.5	38.2	38.2	38.4	38.2	38.7	06 45	42.0	02 00	36.7	5.3
36.9	35.9	35.3	36.6	37.4	37.2	38.0	37.3	37.3	38.3	06 25	41.5	16 48	34.6	6.9
38.3	37.9	38.0	38.1	37.7	37.0	36.7	37.6	37.6	37.0	07 10	39.4	03 15	32.5	6.9
38.0	38.3	38.0	38.3	38.5	38.2	37.9	37.9	37.8	38.2	07 22	41.7	01 15	34.6	7.1
39.2	39.3	39.3	38.9	38.2	37.9	37.3	37.5	37.9	38.2	06 55	40.8	01 45	35.2	5.6
38.1	38.1	37.7	37.7	37.8	37.7	37.4	37.2	36.8	37.9	06 45	41.0	01 35	35.1	5.9
37.9	37.9	37.9	37.8	38.1	37.7	37.5	37.4	37.2	38.0	06 40	42.0	01 55	34.9	7.1
37.8	38.1	38.0	37.7	37.7	37.7	37.7	37.7	37.7	38.0	07 00	41.2	01 25	33.9	7.3
38.7	38.3	38.0	38.0	37.8	37.8	37.8	38.0	38.1	38.8	07 05	43.3	02 00	36.2	7.1
38.4	38.3	38.0	37.9	37.9	37.9	37.7	37.6	37.6	38.7	06 30	43.2	01 52	35.0	8.2
38.6	38.6	38.3	38.0	37.9	37.7	37.7	37.7	37.9	38.6	06 42	43.5	02 00	34.9	8.6
38.5	38.3	38.3	38.3	38.1	37.9	37.6	37.6	37.5	38.8	08 00	43.9	02 32	35.5	8.4
38.3	38.3	37.6	37.4	37.2	37.2	37.6	37.5	37.5	38.6	06 50	43.1	01 50	35.5	7.6
37.0	37.3	37.4	37.5	37.5	37.5	37.5	37.4	37.4	37.8	06 28	41.7	01 40	35.4	6.3
37.4	37.5	37.5	37.4	37.4	37.7	37.3	37.5	37.7	37.6	04 42	40.2	02 00	36.1	4.1
35.3	36.0	36.9	36.9	36.9	36.9	37.0	36.9	36.9	36.4	07 20	38.0	11 15	34.5	3.5
37.0	37.2	37.2	37.2	37.0	36.9	36.9	36.9	36.9	37.2	06 45	41.1	01 35	34.9	6.2
38.2	38.4	38.3	38.3	38.2	38.1	38.1	38.1	38.0	38.4				5.6	Mean
38.7	38.7	38.6	38.5	38.4	38.2	38.1	38.1	38.1						Mean†
37.2	37.0	37.1	37.4	37.5	37.3	37.3	37.3	37.3						Mean††

†Five international quiet days.

††Five international disturbed days.

ΔLoss of record; day omitted for means.

TABLE 3

## Hourly Values of Declination (westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : September

2° Plus tabular quantities

Date	Hours G.M.T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1†	36.7	36.0	35.9	36.1	37.3	39.2	40.0	39.6	38.7	38.2	37.5	36.9	36.5	37.1	37.2
2	36.4	35.1	34.4	35.2	37.1	38.6	41.0	41.8	40.4	38.6	37.2	35.8	35.7	35.8	35.9
3††	36.4	34.3	32.2	32.9	36.7	38.6	39.5	38.6	39.1	38.5	37.2	36.3	36.3	36.3	36.5
4††	36.4	35.3	35.0	36.1	37.1	38.4	37.8	37.8	35.0	33.7	32.9	32.1	32.8	32.8	34.4
5††	35.7	32.9	32.1	33.6	35.6	37.0	38.3	37.7	36.0	32.8	31.1	30.0	30.0	30.6	33.2
6	35.6	34.1	34.3	36.1	37.5	38.4	38.9	38.3	38.3	37.9	36.5	35.9	35.2	35.5	35.6
7††	35.1	33.7	33.5	35.2	37.2	39.6	41.2	42.1	41.5	40.4	38.4	36.9	35.8	35.2	35.6
8	35.6	34.2	33.8	35.3	37.4	39.6	41.7	42.5	41.0	38.9	38.1	36.4	35.4	35.4	35.4
9	36.7	35.3	34.3	35.1	36.4	38.3	40.3	41.6	41.0	39.7	38.3	37.4	36.8	36.1	35.8
10	36.0	35.0	33.9	34.0	35.7	37.4	39.8	41.0	41.0	39.6	37.5	36.6	36.6	36.4	36.4
11	36.0	34.9	34.5	35.2	36.7	38.8	40.7	40.7	40.4	39.4	37.9	37.2	37.2	37.2	36.9
12	36.5	35.1	34.1	34.6	35.3	37.4	38.3	39.3	38.4	37.2	36.6	36.6	36.6	36.5	36.0
13	36.3	35.3	34.9	35.4	36.4	37.6	39.2	39.7	39.4	38.9	37.2	36.1	36.2	35.9	35.5
14	36.4	35.1	34.3	35.0	35.7	37.2	39.2	39.7	39.7	39.2	37.9	37.2	37.1	36.4	36.1
15†	36.5	35.1	35.3	34.9	36.4	38.4	40.2	41.0	41.2	40.2	38.6	37.5	37.4	37.0	36.7
16†	36.5	35.7	35.0	35.4	37.0	39.1	41.0	41.4	40.6	39.5	38.4	37.2	37.1	37.1	37.0
17	36.5	35.4	34.6	34.3	34.9	37.0	40.1	40.8	39.2	38.4	37.6	36.6	36.6	37.0	37.3
18	36.0	34.5	33.9	33.9	34.5	35.5	37.7	39.1	39.4	39.4	37.7	36.9	36.7	36.6	36.4
19†	35.5	34.9	34.8	35.6	37.0	37.8	39.1	40.4	39.7	38.8	37.7	37.0	37.1	37.1	36.9
20	36.6	36.2	35.9	36.8	37.7	39.1	40.3	40.4	39.8	38.6	37.5	36.8	36.9	36.9	36.9
21	36.2	36.3	34.8	36.5	37.9	39.6	40.3	41.0	40.5	39.0	37.7	37.3	36.6	36.5	36.5
22	35.5	34.8	34.0	35.2	36.3	37.7	38.7	39.2	39.0	37.8	37.0	36.4	36.6	36.7	36.6
23	36.0	35.5	34.9	35.4	36.5	38.9	40.2	40.2	39.2	37.9	37.4	36.5	36.8	37.2	37.1
24	35.8	35.3	34.7	34.3	35.8	37.4	38.6	38.6	38.5	37.0	35.3	34.9	35.7	36.4	36.7
25†	35.8	35.1	34.7	35.2	36.5	37.9	40.1	40.4	39.7	39.0	37.8	36.6	36.6	36.6	36.6
26	36.5	35.8	34.3	35.4	36.5	38.7	41.1	40.9	39.8	38.3	37.3	36.6	36.6	36.7	36.9
27	37.2	36.4	34.6	34.8	35.6	37.4	38.0	38.1	38.4	38.1	37.4	36.6	36.3	36.1	36.6
28	36.7	36.0	35.3	35.7	36.6	37.4	38.0	39.1	38.5	37.8	36.1	35.6	36.1	36.6	36.7
29	36.8	36.3	35.3	35.4	36.0	36.7	37.8	38.5	37.9	36.8	35.8	35.8	36.4	36.5	36.4
30††	36.8	35.8	35.1	34.7	35.5	36.5	37.6	38.0	37.9	36.9	36.5	35.9	36.2	35.6	35.5
Mean	36.2	35.2	34.5	35.1	36.4	38.0	39.5	39.9	39.3	38.2	37.0	36.2	36.1	36.1	36.2
Mean†	36.2	35.4	35.1	35.4	36.8	38.5	40.1	40.6	40.0	39.1	38.0	37.0	36.9*	37.0	36.9
Mean††	36.1	35.4	33.6	34.5	36.4	38.0	38.9	38.8	37.9	36.5	35.2	34.2	34.2	34.1	35.0

†Five international quiet days.

††Five international disturbed days.

Δ Loss of record; day omitted for means.

TABLE 3

## Hourly Values of Declination (westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : September

2° Plus tabular quantities

Hours G.M.T.										Maximum		Minimum		Range	Date		
15	16	17	18	19	20	21	22	23	Mean	Time		Time					
										Mag.		Mag.					
										H. M.		H. M.					
37.2	37.2	37.2	37.1	37.1	36.8	36.8	36.9	36.8	37.3	06 00	40.0	02 00	35.9	4.1	1†		
36.2	36.5	37.2	37.2	37.1	37.1	36.8	36.6	36.8	37.1	06 44	42.0	02 00	34.4	7.6	2		
36.7	37.0	37.0	36.7	37.1	37.0	36.7	36.7	36.7	36.7	06 31	40.3	01 52	31.6	8.7	3††		
35.0	35.7	36.4	37.1	36.8	35.7	35.8	36.3	35.7	35.5	05 22	38.8	10 50	31.8	7.0	4††		
32.9	34.2	35.2	35.6	35.9	35.7	35.6	35.5	36.0	34.3	06 12	39.1	12 05	29.9	9.2	5††		
35.8	36.1	36.1	35.9	36.1	36.1	35.8	35.8	35.6	36.3	06 10	39.1	01 18	33.8	5.3	6		
35.8	36.8	36.6	36.9	36.9	36.6	36.3	36.1	35.9	37.1	06 58	42.2	01 30	33.1	9.1	7††		
36.1	36.0	36.4	36.5	36.7	36.7	36.5	36.5	36.7	37.0	06 52	42.7	01 41	33.7	9.0	8		
36.4	36.5	36.7	36.5	36.7	36.4	36.8	36.7	36.4	37.2	06 52	41.7	01 52	34.1	7.6	9		
36.3	35.9	35.7	36.0	35.9	35.9	36.1	36.3	36.3	36.7	07 55	41.3	02 10	33.5	7.8	10		
36.7	36.6	36.6	36.6	36.2	36.2	36.6	36.5	36.5	37.2	06 25	40.9	01 20	34.3	6.6	11		
35.9	36.2	36.3	36.5	36.6	36.6	36.6	36.6	36.6	36.5	06 40	39.4	02 00	34.1	5.3	12		
35.8	36.1	36.1	36.1	36.1	36.4	36.4	36.5	36.5	36.7	07 00	39.7	02 00	34.9	4.8	13		
36.4	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.9	08 15	40.0	02 00	34.3	5.7	14		
36.7	36.7	36.5	36.5	36.4	36.4	36.5	36.7	36.8	37.3	08 00	41.2	01 50	33.9	7.3	15†		
37.0	36.5	36.7	36.5	36.4	36.4	36.4	36.4	36.5	37.4	07 00	41.4	01 50	34.9	6.5	16†		
37.3	37.4	37.1	37.0	37.0	36.7	37.0	37.1	36.6	37.1	06 35	41.1	02 15	34.3	6.8	17		
36.3	36.4	36.3	36.3	36.2	36.0	36.0	36.0	35.9	36.4	07 50	39.7	02 36	33.5	6.2	18		
37.0	37.0	36.9	36.7	36.4	36.3	36.3	36.4	36.6	37.0	07 15	40.8	01 55	34.6	6.2	19†		
36.9	36.6	36.6	36.6	36.6	36.5	36.5	36.5	36.5	37.3	07 00	40.4	02 00	35.7	4.7	20		
36.2	36.2	36.2	36.2	36.2	36.2	36.1	36.1	35.9	37.2	07 00	41.1	01 35	34.7	6.4	21		
37.0	36.9	36.7	36.4	36.3	36.2	36.2	35.9	35.9	36.6	07 00	39.2	01 45	33.8	5.4	22		
37.1	37.1	37.1	36.7	36.4	36.4	36.4	36.4	36.3	37.1	06 21	40.5	02 00	34.9	5.6	23		
37.1	36.5	36.4	36.3	36.3	36.0	35.8	35.8	35.8	36.3	05 55	39.1	02 45	33.7	5.4	24		
36.6	36.9	37.2	36.9	36.6	36.5	36.5	36.5	36.6	37.0	06 20	40.7	02 02	34.4	6.3	25†		
37.0	37.0	37.0	37.0	37.0	37.0	37.2	37.2	37.2	37.3	06 00	41.6	02 05	33.7	7.9	26		
36.7	36.7	36.7	36.7	36.6	36.6	36.7	36.7	36.7	36.7	07 20	38.5	02 05	34.3	4.2	27		
36.6	36.7	36.7	36.8	36.7	36.7	36.7	37.1	37.0	36.8	07 30	39.4	01 55	35.2	4.2	28		
36.5	36.7	36.8	36.5	36.5	36.7	36.9	37.2	36.9	36.6	06 50	38.8	02 00	35.3	3.5	29		
35.5	35.9	36.5	36.5	36.3	37.0	37.0	36.9	36.9	36.4	06 25	38.3	03 02	34.4	3.9	30††		
36.4	36.5	36.6	36.6	36.5	36.4	36.4	36.5	36.4	36.8					6.3	Mean		
36.9	36.9	36.9	36.7	36.6	36.5	36.5	36.6	36.7							Mean†		
35.2	35.9	36.39	36.6	36.6	36.4	36.3	36.3	36.2							Mean††		

†Five international quiet days.

††Five international disturbed days.

Δ Loss of record; day omitted for means.



TABLE 4

## Hourly values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : October

2<sup>n</sup> plus tabular quantities

		Hours G.M.T.														
Date		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	1††	36.9	35.6	35.5	36.7	36.9	37.8	37.7	38.4	38.0	37.0	37.0	37.0	36.7	35.7	35.0
	2	37.0	36.7	36.9	36.8	37.1	37.5	37.7	37.8	37.1	36.1	35.1	34.9	34.6	34.7	35.6
	3	36.8	36.5	36.7	37.5	38.6	39.9	39.9	39.5	38.9	38.2	37.0	36.5	36.5	36.8	37.0
	4	37.1	36.4	35.6	35.9	36.8	38.3	39.6	40.0	39.2	37.6	36.6	36.2	37.1	37.1	36.8
	5	36.2	35.1	35.1	36.2	37.7	38.7	39.3	39.1	38.6	37.3	36.7	36.6	37.2	37.3	36.9
	6††	37.0	36.3	34.8	35.2	37.5	37.3	37.3	37.3	37.3	37.7	36.1	33.8	31.9	33.3	32.8
	7††	34.5	33.2	33.3	34.3	34.6	36.0	36.1	36.1	35.9	35.4	33.9	32.5	33.2	33.3	32.9
	8	37.3	36.4	37.3	38.1	39.0	40.2	40.3	40.6	40.2	38.9	36.8	35.7	36.1	36.2	36.2
	9	37.5	36.2	36.2	36.8	37.5	38.2	39.3	39.9	39.5	39.3	38.1	37.3	37.8	37.8	37.8
	10	37.9	37.5	37.5	37.5	37.4	38.3	39.2	39.5	39.2	38.2	36.9	36.4	36.8	37.4	37.2
	11	37.5	36.8	36.0	36.1	37.2	38.8	41.1	40.2	39.2	38.8	37.4	37.2	37.4	37.5	37.4
	12†	37.8	37.6	37.4	36.9	37.2	38.2	40.0	40.3	40.2	38.9	38.1	37.6	37.6	37.6	37.5
	13†	38.3	38.3	38.3	38.3	38.2	38.5	40.2	40.4	39.2	40.4	38.9	38.1	37.6	37.6	37.8
	14†	38.3	37.8	37.4	37.5	37.5	37.9	38.8	38.9	38.6	38.3	38.1	37.5	37.6	37.9	37.5
	15	37.6	37.5	37.5	37.6	38.3	39.8	41.8	41.7	39.7	40.1	39.0	38.6	38.4	37.6	37.6
	16	37.2	37.6	38.0	37.9	38.6	38.2	38.9	39.1	39.0	38.3	37.6	37.3	37.3	37.3	37.3
	17	37.6	38.0	37.6	37.0	37.5	38.9	40.3	40.3	39.7	38.9	37.7	37.3	37.6	37.7	37.6
	18	37.7	37.6	37.0	36.5	36.2	37.5	37.6	37.5	36.9	26.6	36.1	35.6	36.1	36.8	36.8
	19	37.3	37.3	37.6	38.0	38.3	38.9	39.4	39.1	39.0	38.6	37.9	37.6	37.7	37.6	37.6
	20	37.7	37.5	37.2	37.3	38.3	39.4	40.3	39.8	38.9	38.6	38.2	38.2	38.4	37.7	37.3
	21	37.5	37.5	37.6	37.9	38.6	39.7	40.7	40.0	38.2	37.5	37.3	37.2	37.5	37.6	37.6
	22†	37.6	37.6	37.2	37.1	37.8	39.5	40.8	40.6	40.1	39.1	38.3	38.0	38.1	38.0	37.7
	23†	38.5	38.0	37.7	38.1	39.2	40.7	41.9	41.4	40.5	39.2	38.5	38.1	38.4	38.2	37.9
	24	38.2	38.2	38.6	39.3	40.1	41.4	42.0	41.1	40.6	39.3	38.3	37.8	37.6	37.9	37.9
	25††	37.8	37.6	37.6	38.0	38.0	39.4	40.6	39.2	37.8	36.4	35.9	36.1	36.5	36.4	36.4
	26††	36.9	36.9	37.9	37.4	37.6	38.7	38.4	37.9	37.3	36.6	35.9	35.2	34.1	34.9	35.1
	27	37.9	37.4	37.4	37.1	37.1	38.1	38.8	38.8	38.7	39.1	37.8	36.1	35.4	36.4	36.6
	28	38.0	38.0	37.7	37.6	37.9	38.1	38.7	37.9	36.6	36.6	36.2	35.2	35.2	35.5	35.6
	29	38.0	38.0	37.9	38.6	39.3	39.4	39.5	39.4	37.1	37.7	36.6	35.2	35.3	35.9	36.3
	30	38.1	38.3	38.1	37.9	37.9	38.7	38.2	37.8	36.8	36.5	36.1	35.4	35.7	36.5	36.4
	31	37.9	37.9	37.9	37.6	37.8	38.9	38.2	36.6	36.4	36.5	36.2	36.4	37.5	37.5	37.2
Mean		37.5	37.1	37.0	37.2	37.8	38.7	39.4	39.2	38.5	38.0	37.1	36.5	36.6	36.8	36.7
Mean†		38.1	37.9	37.6	37.6	38.0	38.9	40.3	40.3	39.7	39.2	38.4	37.9	37.9	37.9	37.7
Mean††		36.6	35.9	35.8	36.3	36.9	37.8	38.0	37.8	37.3	36.6	35.8	34.9	34.5	34.7	34.4

†Five international quiet days.

††Five international disturbed days.

ΔLoss of record; day omitted for means.

TABLE 4

## Hourly values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : October

2° plus tabular quantities

Hours G.M.T.										Maximum		Minimum		Date
										Mean		Range		
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	
										H. M.		H. M.		
36.0	35.7	36.0	36.7	36.9	36.9	37.4	37.0	36.9	36.7	06 42	39.1	01 25	35.4	1††
35.6	35.3	35.7	36.1	36.3	36.3	36.3	36.7	37.0	36.3	06 30	37.9	11 52	34.3	2
37.0	36.8	36.8	37.0	37.0	37.0	37.1	37.1	37.1	37.5	05 25	40.2	01 25	36.3	3
36.2	36.6	35.7	36.4	36.5	35.5	35.7	35.8	36.4	36.9	07 00	40.0	02 00	35.5	4
36.9	37.2	37.3	37.2	37.2	37.3	37.4	37.4	37.3	37.2	06 25	39.4	01 41	34.9	5
32.9	31.8	33.3	36.0	34.9	35.9	34.6	34.6	35.7	35.2	06 45	38.7	15 50	31.2	6††
34.5	34.6	33.5	36.0	35.6	35.9	36.4	37.1	36.8	34.8	06 15	37.4	00 38	31.8	7††
36.5	36.5	36.4	36.5	36.8	37.1	37.5	37.5	37.5	37.6	07 15	40.9	11 00	35.7	8
37.9	37.9	37.9	38.1	38.1	38.1	38.2	38.3	38.3	38.0	06 15	40.0	01 15	36.1	9
37.4	37.4	37.5	37.4	37.4	37.4	37.4	37.6	37.8	37.7	07 00	39.6	11 00	36.4	10
37.4	37.4	37.5	37.5	37.4	37.4	37.5	37.5	37.5	37.7	05 43	41.6	02 18	35.7	11
37.6	37.6	37.6	37.8	37.8	37.6	37.5	37.9	38.3	38.0	07 00	40.3	03 10	36.8	12†
37.9	37.9	37.8	37.8	37.5	37.5	37.5	37.6	38.1	38.3	07 45	40.7	04 15	37.5	13†
37.5	37.6	37.6	37.5	37.5	37.5	37.5	37.5	37.6	37.8	07 00	38.9	02 00	36.9	14†
37.6	37.6	37.2	36.3	36.2	36.2	36.3	36.5	36.6	38.1	06 00	41.8	18 30	36.1	15
37.5	37.6	37.6	37.6	37.6	37.6	37.5	37.5	37.6	37.8	07 15	39.7	13 15	36.9	16
37.6	37.6	37.6	37.6	37.5	37.6	37.6	37.6	37.9	38.1	06 05	40.4	03 15	36.6	17
36.2	36.6	36.6	36.2	36.5	36.8	36.9	36.9	37.2	36.8	00 01	37.7	10 42	35.4	18
37.6	37.5	37.3	37.3	37.3	37.5	37.6	38.0	37.9	37.9	06 00	39.4	00 48	37.2	19
37.2	36.9	37.2	37.3	37.3	37.5	37.6	37.6	37.6	38.0	06 00	40.4	15 42	36.8	20
37.6	37.7	37.7	37.5	37.3	37.5	37.6	37.6	37.7	37.9	06 00	40.7	10 50	37.0	21
37.7	38.0	38.1	38.0	37.8	37.8	37.8	38.1	38.4	38.3	06 15	41.1	03 15	36.9	22†
37.9	38.1	38.2	38.2	38.1	38.1	38.2	38.4	38.4	38.7	06 00	41.9	02 00	37.6	23†
37.9	37.3	36.1	36.9	36.8	37.2	37.8	37.8	37.9	38.5	05 45	42.1	16 55	35.7	24
36.1	35.1	34.0	34.1	34.7	35.4	36.4	36.5	36.6	36.8	06 12	40.7	16 55	33.4	25††
35.2	36.0	36.3	36.5	36.7	37.6	37.4	37.7	38.0	36.8	05 05	39.1	12 22	33.9	26††
36.7	36.7	36.3	36.8	36.7	36.8	37.7	37.5	38.1	37.3	09 07	39.2	11 35	35.3	27
35.6	35.8	36.5	36.9	36.9	37.4	37.9	38.0	38.0	37.0	05 30	39.0	12 13	34.8	28
36.8	36.6	36.6	36.7	36.6	36.6	36.6	38.0	38.0	37.5	06 10	40.0	11 00	35.1	29
36.4	36.5	37.2	37.1	36.9	37.5	37.2	37.5	37.6	37.2	05 03	38.9	11 50	35.2	30
37.2	37.5	37.6	37.8	37.3	37.5	37.5	37.8	37.8	37.4	05 13	39.3	10 35	35.5	31
36.8	36.8	36.7	37.0	37.0	37.1	37.2	37.4	37.5	37.4	4.3				Mean
37.7	37.8	37.9	37.9	37.7	37.7	37.7	37.9	38.2					Mean†	
34.9	34.6	34.6	35.9	35.8	36.3	36.4	36.6	36.8					Mean††	

†Five international quiet days.

††Five international disturbed days.

ΔLoss of record; day omitted for means.

TABLE 5

## Hourly values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
2' plus tabular quantities

Month : November

		Hours G. M. T.														
Date		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1		38.0	38.0	37.9	37.6	37.5	37.9	38.6	37.9	37.9	37.5	36.9	36.9	37.2	37.5	37.1
2		37.9	38.0	38.0	38.3	38.5	39.0	38.9	37.2	36.5	36.5	36.8	37.6	37.9	37.8	37.5
3		37.6	37.6	37.9	37.4	37.8	38.4	38.4	37.8	37.0	37.1	37.0	36.8	37.7	37.4	37.1
4††		37.8	37.8	37.8	37.2	36.8	37.1	36.7	36.1	35.1	35.1	35.8	36.0	36.0	36.0	35.1
5		37.7	37.8	37.8	37.8	37.8	38.4	38.2	38.1	37.8	37.4	37.0	37.0	37.5	36.8	36.4
6		37.8	37.8	37.8	37.8	37.8	37.8	38.8	38.6	38.2	38.2	37.8	37.5	37.4	37.2	37.2
7†		38.1	37.9	37.8	37.0	36.5	38.1	38.4	37.9	37.7	37.5	37.4	37.2	37.4	37.0	36.8
8†		37.9	38.2	38.5	38.6	39.2	39.8	39.8	39.2	38.2	37.9	37.8	37.8	37.8	37.8	37.7
9†		38.1	38.4	38.5	37.6	37.7	38.1	38.0	37.6	37.0	37.0	36.9	37.0	37.6	37.6	37.3
10		38.0	38.3	38.8	39.1	38.8	38.8	38.7	38.8	38.3	37.7	37.7	38.3	38.5	38.7	37.8
11		39.1	39.9	39.9	39.5	39.1	38.7	38.1	37.4	36.3	36.3	36.2	34.9	35.5	36.2	36.3
12		37.8	38.3	38.3	38.1	37.8	38.5	38.4	38.4	38.4	38.3	37.6	37.1	37.4	37.4	37.7
13††		39.1	38.4	38.1	39.0	38.7	33.9	33.5	28.3	24.4	26.5	26.6	26.2	30.0	30.0	30.8
14††		35.9	36.3	36.3	35.2	34.7	35.4	35.8	35.8	35.5	35.5	35.5	35.5	35.5	35.5	35.6
15††		35.8	35.8	36.1	35.9	36.3	37.5	37.3	37.2	36.2	35.9	36.2	36.2	36.1	36.1	36.3
16††		36.1	36.1	34.0	33.7	35.1	34.9	36.3	35.8	35.3	34.3	35.3	36.0	36.0	36.1	36.2
17		38.1	38.4	37.7	37.1	37.0	37.3	37.6	36.5	35.6	34.8	34.8	35.5	35.9	36.2	36.2
18†		36.9	37.0	37.6	37.3	37.6	37.9	37.6	37.6	36.9	36.3	36.2	36.5	37.5	37.2	36.9
19†		37.3	37.6	37.9	38.2	37.7	37.6	37.3	36.9	36.3	36.2	36.3	36.5	36.9	36.8	36.8
20		38.3	38.3	38.2	38.3	38.9	39.0	39.0	38.2	37.0	36.2	35.9	36.2	36.6	36.9	36.1
21		38.4	38.7	38.9	38.7	38.4	38.5	38.4	36.6	35.2	34.9	35.0	36.9	36.6	35.6	36.0
22		39.1	39.1	39.7	39.2	38.5	37.7	37.6	37.6	36.6	36.4	36.4	37.1	36.9	36.6	36.6
23		38.1	38.4	38.7	39.1	39.1	38.8	39.0	38.5	38.4	37.8	37.3	37.0	37.0	37.0	36.4
24		38.4	38.5	37.8	37.7	37.7	38.4	38.5	37.8	37.7	37.1	36.3	36.2	36.6	37.3	37.0
25		39.0	38.4	38.5	38.4	38.4	38.6	38.5	38.8	38.2	36.8	36.1	34.7	36.4	36.4	35.7
26		37.8	37.7	37.9	38.4	38.4	38.6	38.6	38.4	37.2	36.8	36.7	37.1	37.0	37.1	37.1
27		38.4	38.4	38.5	38.6	38.6	39.1	38.9	38.5	37.7	36.8	36.7	37.0	37.7	37.5	36.7
28		38.8	39.1	39.2	39.1	39.0	38.4	38.3	37.7	37.0	36.7	36.6	36.4	36.9	36.9	37.0
29		38.4	38.7	39.1	39.2	39.2	39.2	39.7	39.8	39.0	37.8	37.0	37.0	37.1	37.6	37.6
30		38.8	39.0	39.0	39.0	39.1	39.1	39.1	38.7	38.0	37.7	37.7	37.7	37.7	37.7	37.7
Mean		38.0	38.1	38.1	37.9	37.9	38.0	38.1	37.5	36.7	36.4	36.3	36.3	36.7	36.7	36.6
Mean†		37.7	37.8	38.1	37.7	37.7	38.3	38.2	37.8	37.2	37.0	36.9	37.0	37.4	37.3	37.1
Mean††		36.9	36.9	36.5	36.2	36.3	35.8	35.9	34.6	33.3	33.5	33.9	34.0	34.7	34.7	34.8

†Five international quiet days.

††Five international disturbed days.

A Loss of record ; day omitted for means

TABLE 5

## Hourly values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : November

2° plus tabular quantities

Hours G. M. T.										Maximum		Minimum					
										Mean		Range				Date	
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.				
										H.	M.	H.	M.				
37.1	37.5	37.5	37.5	37.5	37.5	37.8	37.9	38.0	37.6	06	15	38.7	10	00	36.9	1.8	1
37.3	37.5	37.5	37.1	37.2	37.5	37.5	37.5	37.5	37.6	05	25	39.3	08	00	36.5	2.8	2
37.4	37.1	37.4	37.0	37.2	37.4	37.1	37.0	37.1	37.4	05	50	38.6	11	00	36.8	1.8	3
36.3	36.4	36.3	36.3	36.4	36.4	36.5	36.8	37.4	36.5	01	20	37.9	08	35	35.0	2.9	4††
36.5	36.5	36.7	36.7	36.5	37.0	37.4	37.5	37.8	37.3	05	00	38.4	14	00	36.4	2.0	5
37.4	37.5	37.7	37.5	37.4	37.4	37.8	37.8	37.9	37.8	06	16	39.2	13	00	37.2	2.0	6
37.0	37.5	37.7	37.5	37.7	37.7	37.7	37.8	37.8	37.5	05	45	38.8	03	35	36.4	2.4	7†
37.5	37.8	37.8	37.8	37.8	37.8	37.8	37.8	37.8	38.3	05	05	39.9	15	00	37.5	2.4	8†
37.4	37.7	37.7	37.6	37.6	37.6	37.7	37.7	37.8	37.6	01	42	38.5	10	00	36.9	1.6	9†
37.7	37.7	37.7	37.6	37.6	37.7	37.8	38.4	39.0	38.2	03	00	39.1	18	00	37.6	1.5	10
36.9	36.9	37.0	37.0	37.1	37.3	37.3	37.7	37.7	37.4	02	14	40.4	11	05	34.5	5.9	11
38.0	37.7	37.7	36.0	34.6	36.4	38.7	37.7	38.3	37.7	21	55	41.9	18	55	33.5	8.4	12
32.5	33.5	33.8	34.8	35.7	34.8	35.6	35.7	36.0	33.2	03	55	40.5	08	01	22.6	17.9	13††
36.1	36.2	36.2	36.3	35.8	35.8	35.4	35.6	35.6	35.7	01	55	37.0	03	30	34.5	2.5	14††
37.3	37.0	36.2	35.8	35.8	36.1	34.9	35.5	35.1	36.2	06	00	37.6	22	40	34.1	3.5	15††
37.0	36.9	36.7	36.6	36.9	36.9	37.0	37.0	37.0	36.0	15	00	37.0	04	40	33.4	3.6	16††
36.2	36.8	37.0	36.3	36.2	36.2	36.2	36.2	36.5	36.5	00	50	38.6	09	00	34.8	3.8	17
37.0	37.2	37.2	37.0	36.9	36.9	36.9	36.9	37.2	37.1	05	00	37.9	10	00	36.2	1.7	18†
36.9	37.3	37.5	37.3	37.3	37.6	37.6	38.0	38.2	37.3	03	00	38.3	03	45	36.1	2.2	19†
36.9	37.2	37.3	37.5	37.6	37.6	37.6	37.7	38.3	37.5	05	30	39.3	14	02	35.8	3.5	20
36.2	35.9	35.7	34.9	36.0	36.9	37.1	38.3	39.2	37.0	23	05	39.4	09	02	34.3	5.1	21
36.7	36.9	37.0	36.9	36.9	37.0	37.4	37.7	38.1	37.5	01	40	40.1	08	15	36.2	3.9	22
38.1	37.1	37.1	37.4	37.7	37.7	37.7	37.8	38.4	37.9	03	00	39.1	14	00	36.3	2.8	23
37.4	37.7	37.7	38.3	38.4	39.0	38.7	38.8	39.1	37.8	23	05	39.2	10	55	36.0	3.2	24
36.1	36.4	37.5	37.1	37.0	37.1	37.2	37.7	37.8	37.4	06	20	39.2	10	55	34.2	5.0	25
37.2	37.5	37.7	37.7	37.8	37.8	37.5	37.9	38.2	37.7	05	35	38.8	12	20	36.4	2.4	26
37.0	37.2	37.1	37.0	37.2	37.7	37.8	38.4	38.4	37.8	05	25	39.2	14	15	36.4	2.8	27
37.0	37.6	37.6	37.6	37.7	37.4	37.7	37.7	38.0	37.7	02	15	39.6	10	30	36.3	3.3	28
37.6	37.7	37.7	37.8	38.0	38.3	38.3	38.3	38.5	38.3	07	00	39.8	10	00	37.0	2.8	29
37.7	37.7	37.8	37.7	37.8	38.3	38.3	37.7	38.3	38.2	04	00	39.1	21	43	37.6	1.5	30
36.9	37.1	37.1	37.0	37.0	37.2	37.3	37.5	37.7	37.3					3.6	Mean		
37.2	37.5	37.6	37.4	37.5	37.5	37.5	37.6	37.8					Mean†				
35.8	36.0	35.8	36.0	36.1	36.0	35.9	36.1	36.2					Mean††				

†Five international quiet days.

††Five international disturbed days.

Δ Loss of record; day omitted for means.

TABLE 6

## Hourly values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : December

2° plus tabular quantities

		Hours G.M.T.														
Date		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1††		39.5	40.5	40.1	40.4	38.8	36.3	34.9	36.3	35.7	36.0	35.2	35.5	35.7	36.3	36.3
2††		37.1	38.0	39.1	38.8	38.4	37.6	37.3	37.7	37.4	37.4	37.1	37.3	37.3	36.9	37.0
3		38.0	38.5	39.0	38.9	38.3	38.3	38.6	38.9	37.9	37.6	37.2	36.9	37.2	37.2	36.9
4†		38.2	38.3	39.0	38.7	38.7	39.0	39.0	39.0	37.6	36.2	36.2	37.2	37.6	37.3	37.0
5		38.3	38.3	39.1	39.1	39.4	39.4	38.9	38.4	38.2	37.6	37.2	36.5	36.3	36.8	36.8
6		38.4	38.4	38.9	39.3	39.0	39.0	38.9	37.7	36.9	35.9	35.4	35.5	36.2	36.8	36.3
7		37.6	38.3	39.0	39.0	39.3	39.3	39.0	39.0	38.0	37.3	37.0	36.8	36.9	36.3	36.5
8		38.2	37.6	38.0	39.1	40.0	40.3	40.4	40.4	39.0	37.7	36.3	35.8	36.8	37.3	37.3
9		38.6	38.7	38.6	37.5	36.8	37.4	37.5	38.8	38.3	37.6	37.4	36.9	36.8	37.1	36.8
10		38.5	38.2	38.1	37.1	36.8	38.1	39.2	39.9	39.6	38.8	37.5	36.8	36.8	37.5	37.5
11†		38.2	38.3	38.8	38.1	37.5	37.8	38.2	38.5	38.3	38.3	37.5	36.8	36.8	37.2	36.8
12		38.5	38.6	38.9	39.2	38.9	38.9	38.9	38.3	38.1	38.3	37.5	37.1	37.2	37.4	37.1
13		38.3	38.2	38.3	38.9	38.9	38.9	38.1	36.9	36.7	37.5	37.4	37.2	37.1	36.8	36.8
14†		38.6	38.9	38.9	39.2	38.6	39.0	39.0	38.9	38.3	39.0	38.7	38.3	38.6	38.3	37.9
15††		39.0	38.7	39.0	38.2	37.2	38.0	38.3	38.3	38.3	37.7	37.0	36.3	36.2	36.2	34.9
16††		39.4	40.4	41.1	40.2	39.4	38.0	36.3	35.3	34.6	35.0	35.7	36.3	36.9	37.1	36.7
17†		37.7	38.1	38.5	38.5	39.2	39.7	39.1	39.9	39.1	38.8	37.8	37.7	38.0	37.7	37.7
18		38.7	38.7	38.7	38.7	38.7	39.0	39.1	38.3	36.9	36.9	36.3	37.0	37.1	37.0	36.6
19		39.1	39.1	39.1	39.1	39.7	40.2	39.8	39.0	38.3	37.7	37.6	37.7	38.4	38.0	37.6
20		38.8	39.0	39.1	38.9	39.2	40.0	40.2	39.3	38.2	37.1	36.5	37.0	37.8	37.5	37.8
21		39.1	38.5	38.5	39.3	40.5	41.3	41.6	40.6	39.1	37.4	36.7	37.2	36.7	38.4	38.4
22		38.2	38.2	38.4	39.2	39.5	40.9	40.7	39.6	38.2	37.5	37.0	37.4	37.5	37.5	37.8
23		38.4	38.2	37.9	38.4	39.7	41.5	41.5	40.2	37.8	36.6	36.3	36.0	36.9	37.0	37.3
24		38.7	38.7	38.3	38.7	40.4	41.2	41.5	40.1	38.8	38.4	38.3	38.0	38.1	37.8	37.4
25†		38.5	38.5	38.3	38.1	39.2	41.1	41.2	40.5	39.1	38.4	37.7	37.8	38.3	38.3	38.0
26		39.2	39.1	38.3	38.2	39.0	40.1	41.0	40.8	38.7	37.3	36.8	36.8	37.3	37.2	37.7
27††		39.0	39.1	40.0	40.4	40.0	40.8	42.4	40.8	40.4	38.7	38.0	37.6	36.9	36.2	35.8
28		38.4	38.4	38.3	38.0	38.3	39.1	40.0	39.0	38.6	37.6	36.9	35.8	36.9	37.0	36.6
29		38.7	38.4	38.2	37.2	37.5	38.9	40.2	39.3	38.9	38.5	38.1	38.5	38.2	37.5	37.4
30		38.6	38.6	37.8	37.6	37.5	38.1	38.9	39.3	38.9	37.6	37.4	37.4	37.5	37.4	37.1
31		38.5	38.6	38.9	38.9	38.3	38.5	39.3	39.7	39.7	37.2	36.1	36.2	37.1	37.4	37.5
Mean		38.5	38.6	38.8	38.7	38.8	39.2	39.3	39.0	38.2	37.5	37.0	36.9	37.2	37.2	37.1
Mean†		38.2	38.4	38.7	38.5	38.6	39.3	39.3	39.4	38.5	38.1	37.6	37.6	37.9	37.8	37.5
Mean††		38.8	39.3	39.9	39.6	38.8	38.1	37.8	37.7	37.3	37.0	36.6	36.6	36.6	36.5	36.1

†Five international quiet days.

††Five international disturbed days.

ΔLoss of record ; day omitted for means.

TABLE 6

## Hourly values of Declination (Westerly), 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : December

2° plus tabular quantities

House G.M.T.										Maximum		Minimum		Range	Date		
15	16	17	18	19	20	21	22	23	Mean	Time	Mag.	Time	Mag.				
										H.	M.	H.	M.				
36.2	36.2	35.6	35.6	35.9	35.9	36.3	37.0	37.1	36.8	03	25	41.5	05	44	34.1	7.4	1††
37.0	37.0	37.0	37.0	37.0	37.1	37.6	37.7	37.7	37.5	01	50	39.4	13	00	36.9	2.5	2††
37.0	37.2	37.6	37.6	37.5	37.5	37.6	37.6	38.2	37.8	03	05	39.0	10	35	36.8	2.2	3
37.0	37.6	37.5	37.3	37.2	37.2	37.5	37.6	37.7	37.7	02	00	39.0	09	15	36.1	2.9	4†
36.8	37.0	37.3	37.3	37.3	37.6	37.9	38.3	38.2	37.8	04	45	39.6	11	40	36.2	3.4	5
36.3	36.2	36.2	36.1	35.9	36.2	36.9	37.6	37.6	37.2	03	00	39.3	09	45	34.9	4.4	6
36.9	37.0	37.0	37.2	37.5	37.6	37.7	37.0	38.0	37.7	04	50	39.6	13	15	36.1	3.5	7
37.5	37.5	37.6	37.6	37.6	37.7	37.7	38.2	38.3	38.1	05	35	41.2	10	20	36.5	5.7	8
37.5	37.5	37.5	37.5	38.1	38.2	38.2	38.2	38.3	37.7	07	00	38.9	03	58	36.5	2.4	9
37.5	37.6	37.8	37.8	38.1	38.2	38.6	38.3	38.2	38.0	06	58	40.0	11	20	36.5	3.5	10
37.1	37.5	37.5	37.5	37.9	38.2	38.2	38.2	38.2	37.8	02	00	38.8	11	00	36.7	2.1	11†
36.8	37.1	37.2	37.5	37.1	37.1	37.4	37.6	38.2	37.9	03	00	39.2	11	10	36.5	2.7	12
37.1	37.5	37.5	37.6	37.6	37.9	38.2	38.2	38.3	37.7	04	10	39.0	07	32	36.2	2.8	13
37.9	38.2	38.3	38.6	38.6	38.9	39.0	39.0	39.0	38.7	02	35	39.6	14	00	37.9	1.7	14†
35.5	34.8	34.8	35.1	35.8	36.1	36.9	38.3	38.6	37.0	00	01	39.0	14	00	34.8	4.2	15††
36.9	37.3	37.3	37.3	37.1	37.1	37.0	37.0	37.4	37.4	02	00	41.1	07	40	34.2	6.9	16††
37.7	38.1	38.1	38.3	38.3	38.3	38.3	38.4	38.8	38.4	06	25	40.5	00	01	37.7	2.8	17†
36.6	36.4	37.1	37.8	38.4	38.4	38.5	38.4	38.7	39.0	05	55	39.2	10	12	35.6	3.6	18
37.7	38.3	38.5	38.5	38.4	38.4	38.4	38.5	38.5	38.6	05	35	40.4	10	25	37.3	3.1	19
38.1	38.4	38.5	38.5	38.8	39.3	38.8	38.8	38.9	38.5	05	45	40.6	09	15	36.4	4.2	20
37.8	37.9	38.5	38.6	38.6	38.9	39.1	38.2	38.2	38.7	05	30	41.7	10	35	36.5	5.2	21
37.9	37.9	38.1	38.4	38.5	38.5	38.5	38.5	38.5	38.4	05	00	40.9	09	50	36.8	4.1	22
37.6	37.7	38.3	38.5	38.7	38.5	38.5	38.4	38.4	38.3	05	50	41.8	11	00	35.7	6.1	23
38.0	38.3	38.4	39.0	39.0	39.0	39.0	39.1	38.8	38.9	05	25	41.6	13	45	37.3	4.3	24
38.3	38.5	38.7	38.7	38.7	39.1	39.1	39.1	39.1	38.8	06	00	41.2	10	05	37.4	3.8	25†
38.0	38.2	38.3	38.3	38.3	38.4	38.6	38.9	38.9	38.5	06	30	41.1	10	00	36.6	4.5	26
36.5	37.0	36.2	35.8	36.1	36.8	37.6	38.2	38.3	38.3	05	43	42.6	18	00	35.5	7.1	27††
36.6	37.0	37.0	37.6	38.0	38.3	38.2	38.3	38.3	37.8	06	00	40.3	11	00	35.2	5.1	28
37.2	37.1	37.5	37.5	37.5	37.5	37.5	38.2	38.2	38.1	05	45	40.3	15	46	36.8	3.5	29
36.9	37.5	37.6	38.2	37.5	37.6	37.6	38.2	38.2	37.9	06	30	39.6	14	30	36.8	2.8	30
37.5	37.5	37.5	37.5	38.1	37.5	37.5	37.5	37.5	37.9	06	30	40.2	10	00	36.1	4.1	31
37.2	37.4	37.5	37.6	37.7	37.8	38.0	38.2	38.3	38.0							4.0	Mean
37.6	38.0	38.0	38.1	38.1	38.3	38.4	38.5	38.6								Mean†	
36.4	36.5	36.2	36.2	36.4	36.6	37.1	37.6	37.8								Mean††	

†Five international quiet days.

††Five international disturbed days.

Δ Loss of record ; day omitted for means.

TABLE 7

## Hourly values of Horizontal Force, 1960

Month : July

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

39,000  $\gamma$  plus tabular quantities

Date	Hours G.M.T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1	498	506	509	529	555	593	596	582	561	535	515	506	504	507	500
2	500	500	512	537	553	592	593	608	589	579	554	521	495	507	509
3	514	512	516	538	556	584	615	605	597	581	554	522	519	525	525
4	520	520	519	539	565	600	613	613	602	576	548	527	520	518	511
5	524	523	542	536	547	576	597	597	576	568	536	526	519	511	508
6	521	526	531	545	578	601	614	606	600	580	549	516	515	511	509
7†	517	524	543	571	601	616	620	619	616	599	578	558	543	536	537
8†	535	543	558	584	614	622	607	600	584	559	548	548	553	552	548
9†	538	545	564	604	637	660	665	672	645	605	577	549	550	554	554
10	549	556	564	584	611	636	640	617	593	580	582	577	563	554	549
11	529	535	551	580	629	644	644	631	586	576	550	525	530	537	543
12	540	549	566	596	609	630	618	607	594	587	565	541	531	556	528
13	537	542	542	571	596	626	628	647	634	603	565	542	528	555	528
14††	541	540	548	571	594	629	593	616	591	589	554	527	509	506	514
15††	571	575	577	599	624	621	647	647	613	579	524	506	476	427	416
16††	481	426	428	448	481	507	519	520	482	463	460	455	435	424	424
17	459	458	467	483	508	557	555	539	530	510	492	490	486	477	471
18	496	502	510	539	561	595	584	589	573	565	548	534	525	560	502
19††	522	528	534	553	587	624	631	613	579	553	483	423	432	468	473
20	493	510	514	533	566	596	605	608	581	555	525	498	493	511	511
21	508	515	518	543	580	578	576	582	584	579	571	553	541	532	531
22	530	536	548	571	609	627	613	598	583	568	559	548	541	542	540
23	516	527	541	561	603	624	628	629	612	594	568	546	534	537	543
24	536	541	540	561	599	624	624	631	610	593	580	565	563	553	547
25†	537	537	547	567	613	634	639	628	605	593	581	562	553	558	558
26	550	551	558	576	603	639	652	654	645	625	597	569	550	544	545
27†	536	536	555	586	598	618	631	629	611	603	580	558	550	556	556
28	547	549	566	591	627	653	658	653	637	632	620	597	568	560	567
29	571	567	561	576	581	611	604	608	613	609	586	564	559	556	551
30	524	531	530	546	577	608	604	603	593	576	572	553	515	522	557
31††	546	529	521	527	571	604	616	613	597	552	532	494	491	498	497
Mean	525	427	535	556	585	611	614	612	594	576	553	532	522	524	521
Mean†	533	537	553	582	613	630	632	630	612	592	573	555	550	551	551
Mean††	532	520	522	540	571	597	601	602	572	547	511	481	469	465	465

†Five international quiet days.

††Five international disturbed days.

Δ Loss of record ; day omitted for means.

TABLE 7

## Hourly values of Horizontal Force, 1960

Month : July

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

39,000  $\gamma$  plus tabular quantities

Hours G.M.T.									Maximum		Minimum					
									Mean			Range				
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.			
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	M. H.	Y	M. H.	Y	Y	Y	
488	487	491	497	495	490	492	495	498	518	06 05	619	15 42	482	137	1	
506	505	504	509	509	510	512	512	514	530	07 08	628	12 12	491	137	2	
524	523	523	520	521	516	518	525	521	540	06 06	631	11 20	510	121	3	
507	510	506	511	513	512	516	517	520	538	07 20	641	17 18	502	139	4	
508	506	508	512	517	517	516	516	518	534	05 53	621	16 06	504	117	5	
509	512	513	516	521	523	522	518	517	540	05 53	624	16 06	505	119	6	
534	534	535	534	535	535	533	532	533	558	05 34	631	00 01	515	116	7†	
542	541	538	538	538	539	540	539	539	559	05 06	626	00 01	535	91	8†	
552	551	551	551	551	551	551	546	546	578	07 02	700	00 10	537	163	9†	
544	543	546	546	545	546	539	531	530	568	04 48	644	23 50	526	118	10	
544	543	543	540	540	538	535	537	538	560	05 12	656	11 15	523	133	11	
524	525	528	532	534	538	539	538	536	559	05 14	636	15 10	522	114	12	
530	530	523	532	533	538	540	543	543	561	06 50	654	16 50	520	134	13	
527	521	522	509	514	527	535	546	566	550	05 02	664	17 40	501	163	14††	
410	413	431	426	423	431	475	476	466	515	06 42	672	15 20	406	266	15††	
424	423	426	438	450	450	454	457	458	456	05 10	547	01 15	468	79	16††	
474	473	485	484	483	486	489	488	487	493	04 56	572	01 28	452	120	17	
502	501	503	510	509	512	523	519	521	533	05 08	614	14 50	489	125	18	
464	461	472	472	486	496	489	490	489	513	05 10	660	11 22	390	270	19††	
502	505	506	507	512	500	500	506	512	527	07 12	629	11 47	481	148	20	
502	526	522	523	525	526	527	526	525	541	04 15	592	00 01	506	86	21	
534	532	533	533	528	525	526	525	527	553	05 15	641	21 40	520	121	22	
538	535	532	531	534	534	535	537	537	557	06 48	640	00 25	510	130	23	
543	540	538	537	537	537	537	534	537	563	06 10	657	22 00	531	126	24	
556	552	550	546	543	543	545	547	550	568	05 38	642	01 04	535	107	25†	
550	554	552	545	545	547	546	541	534	564	07 00	663	22 58	530	133	26	
550	548	545	547	550	551	551	552	551	579	05 28	639	00 30	533	106	27†	
572	570	569	565	560	553	556	561	562	587	06 20	662	00 15	546	116	28	
543	519	501	493	499	505	523	536	528	557	05 10	629	17 50	478	151	29	
531	524	522	522	532	536	539	545	549	550	05 10	637	12 02	505	132	30	
497	499	491	506	511	514	513	519	521	532	06 12	628	11 28	484	144	31††	
517	516	516	517	519	520	523	524	525	544					134	Mean	
547	545	544	543	543	544	544	543	544								Mean†
464	463	468	470	477	484	493	498	500								Mean††

†Five international quiet days.

††Five international disturbed days.

ΔLoss of record ; day omitted for means.



TABLE 8

## Hourly values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : August

39,000  $\gamma$  plus tabular quantities

Date	Hours G.M.T.															
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
1	523	524	525	534	539	563	589	604	600	597	582	548	537	527	532	
2	537	538	549	573	599	626	638	636	622	599	576	551	535	527	518	
3	537	543	551	573	596	621	621	613	596	577	553	536	531	536	534	
4†	536	545	551	572	598	623	628	640	630	604	573	551	544	542	540	
5†	539	543	548	566	594	615	617	611	599	586	577	564	557	553	549	
6	547	557	567	594	631	666	683	656	635	611	580	555	547	554	554	
7	557	564	564	582	607	619	620	630	639	616	605	585	561	556	554	
8	557	558	561	585	626	658	679	685	645	631	613	577	556	551	544	
9	525	530	533	560	604	626	604	567	539	545	548	528	513	524	524	
10	530	535	541	568	609	646	676	660	642	611	576	552	542	545	539	
11	534	539	552	571	582	573	619	628	625	620	600	556	529	529	536	
12	534	538	528	545	608	628	617	631	598	564	558	551	509	502	501	
13	541	542	556	577	601	629	635	638	635	623	596	574	558	541	532	
14	528	532	551	585	648	675	675	636	606	583	567	552	547	538	533	
15	543	545	553	573	607	640	651	654	649	617	594	569	556	549	544	
16††	543	547	559	588	627	653	658	646	635	623	611	589	569	549	541	
17††	475	462	468	456	443	471	464	555	541	518	494	465	458	484	485	
18	467	482	500	534	554	582	579	562	568	541	519	519	503	486	482	
19	503	505	520	555	584	607	625	630	617	589	551	536	534	535	524	
20	512	515	530	564	584	616	588	537	536	497	487	499	507	505	495	
21††	508	513	538	581	616	615	629	634	613	569	551	548	535	524	513	
22	512	496	492	490	537	568	595	610	615	607	589	565	448	534	525	
23	522	533	545	565	594	615	634	637	623	602	584	568	553	546	541	
24†	527	532	550	602	646	689	693	675	642	607	573	556	552	551	549	
25†	530	531	539	577	621	639	644	629	608	583	562	549	549	557	557	
26†	553	556	566	589	621	656	675	673	647	627	611	589	574	566	560	
27	532	538	548	580	621	674	681	659	629	611	583	559	556	561	562	
28	552	549	553	555	571	591	588	615	605	579	564	548	540	523	505	
29††	541	578	606	634	672	664	544	481	514	528	539	535	523	517	513	
30††	548	495	495	489	492	463	460	458	443	447	454	450	460	443	436	
31	547	496	508	520	548	570	586	585	576	533	518	512	499	495	488	
Mean	530	531	540	562	593	616	619	615	602	582	564	546	535	531	526	
Mean†	537	541	551	581	616	644	651	646	625	601	579	562	555	554	551	
Mean††	523	519	533	550	570	573	551	555	549	537	530	517	509	503	498	

†Five international quiet days.

††Five international disturbed days.

Δ Loss of record ; day omitted for means.

TABLE 8

## Hourly values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : August

39,000 γ plus tabular quantities

Hours G.M.T.									Maximum			Minimum			Range		Date
15	16	17	18	19	20	21	22	23	Mean								
									Time	Mag.	Time	Mag.	Time	Mag.			
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	H.	M.	Y	H.	M.	Y	Y	
525	526	526	526	527	531	531	543	540	546	06	40	610	00	26	521	89	
518	527	530	521	520	525	529	536	536	557	06	12	646	15	06	515	131	
531	539	537	534	533	537	539	540	538	556	05	16	630	11	42	528	102	
534	534	535	534	536	537	537	536	538	562	06	56	646	16	00	533	113	
548	546	544	544	543	546	546	547	548	564	06	10	622	00	08	534	88	
550	550	547	548	552	553	552	554	559	579	05	40	690	17	02	544	146	
547	547	551	551	553	555	555	555	556	576	07	40	657	17	12	543	114	
539	525	505	500	502	502	516	527	522	569	06	52	696	18	08	497	199	
523	520	518	516	514	520	527	530	531	540	04	24	643	12	00	509	134	
532	526	528	511	508	517	524	530	533	562	05	30	688	18	48	504	184	
526	526	537	538	537	542	544	544	542	560	06	30	646	15	34	521	125	
508	510	518	524	526	529	533	534	540	547	06	40	647	13	15	496	151	
531	528	532	533	534	533	533	529	529	565	05	10	636	15	40	527	109	
540	559	557	549	542	544	547	542	542	570	05	29	744	00	20	525	219	
540	539	540	542	543	549	554	553	547	573	06	19	659	16	18	537	122	
493	433	432	434	429	437	457	464	474	541	05	26	669	19	58	420	249	
477	457	450	445	421	407	415	452	467	468	06	23	608	03	35	321	287	
481	484	487	493	494	496	496	499	502	513	05	34	602	00	01	462	140	
521	528	539	517	499	473	462	488	508	540	06	39	649	20	34	464	185	
500	501	494	489	485	488	488	501	501	517	04	54	647	19	14	479	168	
501	502	499	509	514	501	508	513	515	544	06	42	666	17	46	493	173	
521	523	518	515	527	528	526	526	520	541	08	28	622	02	34	471	151	
538	532	525	535	532	532	532	532	530	560	07	05	645	00	07	519	126	
545	540	533	534	533	538	536	534	533	574	05	24	699	00	05	526	173	
556	549	545	545	544	547	554	554	555	568	05	30	649	00	30	526	123	
554	549	548	548	549	546	538	538	535	582	05	42	683	23	58	526	157	
535	547	538	525	515	521	553	524	525	571	05	38	692	20	15	508	184	
504	517	527	523	523	526	531	535	538	548	06	30	665	14	13	502	163	
525	522	517	501	498	493	481	485	493	538	04	44	719	06	43	464	255	
444	462	470	477	477	479	488	491	490	471	05	31	518	08	26	412	106	
491	493	498	505	502	504	507	515	513	521	06	37	603	14	02	485	118	
523	521	520	518	517	517	521	524	526	549						154	Mean	
547	544	541	541	541	543	542	542	542								Mean†	
488	475	474	473	468	463	470	481	488								Mean††	

†Five international quiet days.

††Five international disturbed days.

ΔLoss of record; day omitted for means.

TABLE 9

## Hourly values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : September

39,000  $\gamma$  plus tabular quantities

		Hours G.M.T.														
Date		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1†		512	516	528	550	579	596	595	588	568	552	547	547	545	536	527
2		524	526	538	561	618	642	650	647	619	578	548	527	532	528	502
3††		506	485	496	540	581	619	618	582	555	540	531	523	521	514	499
4††		509	513	532	596	630	628	612	633	501	444	411	416	433	411	420
5††		452	465	432	467	483	492	492	505	456	319	274	257	305	333	346
6		481	460	487	544	554	568	556	497	490	500	497	488	479	474	495
7††		487	493	507	552	594	616	610	598	574	554	532	512	481	486	493
8		490	495	507	552	599	633	645	642	613	565	532	512	515	509	496
9		506	508	515	556	540	626	649	634	595	565	531	508	509	498	498
10		507	506	516	559	612	623	645	634	605	581	552	533	533	525	518
11		507	510	537	572	606	656	671	639	615	584	557	543	538	529	522
12		511	512	535	580	592	619	637	523	584	567	531	536	532	520	511
13		524	525	550	579	603	603	595	590	565	543	517	501	512	502	497
14		500	500	510	559	593	621	623	603	586	573	566	548	536	522	517
15†		519	520	536	571	612	643	654	633	619	601	593	584	576	557	545
16†		535	545	567	610	664	706	715	684	641	607	585	573	569	557	550
17		542	538	551	586	618	662	669	645	615	587	571	570	573	564	555
18		528	519	533	559	598	607	646	645	606	584	549	550	549	541	531
19†		521	520	531	576	622	647	645	630	604	584	572	570	564	553	543
20		534	532	548	589	632	664	671	648	625	606	589	576	570	557	548
21		548	545	558	592	632	669	676	657	628	606	584	570	552	539	535
22		531	530	542	581	615	646	645	618	587	566	555	555	557	546	543
23		530	528	546	573	619	656	674	653	598	558	547	537	548	544	535
24		534	531	526	529	594	664	675	626	588	553	514	513	531	527	520
25†		510	506	515	554	608	654	670	650	625	595	572	558	552	543	535
26		523	523	539	591	638	686	726	686	635	589	563	551	551	548	545
27		515	508	510	542	582	628	634	614	590	557	536	525	520	520	520
28		522	526	544	575	609	635	639	632	613	587	551	541	540	538	528
29		525	526	546	575	615	641	649	635	600	583	557	539	529	515	489
30††		518	515	527	545	587	589	606	585	567	554	550	540	518	513	472
Mean		515	514	527	564	601	631	640	622	589	559	537	527	526	518	511
Mean††		519	521	535	572	617	649	656	637	611	588	574	566	561	549	540
Mean†††		494	494	499	540	575	589	588	581	531	482	460	450	452	451	446

† Five international quiet days.

†† Five international disturbed days.

Δ Loss of record ; † day omitted for means.

TABLE 9

## Hourly values of Horizontal Force, 19 60

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : September

39,000  $\gamma$  plus tabular quantities

Hours G. M. T.										Maximum		Minimum		Range	Date
Mean										Time Mag.		Time Mag.			
15	16	17	18	19	20	21	22	23							
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	H.	M.	Y	H.	M.	Y
524	523	522	523	524	524	524	524	526	542	04	58	600	00	40	510
494	498	507	504	507	513	522	504	516	546	06	20	655	18	20	488
497	504	506	505	513	514	514	516	515	529	06	34	673	01	12	461
409	435	442	476	448	411	409	439	437	483	05	22	661	10	42	392
361	394	395	407	445	432	439	445	476	411	06	12	557	10	40	221
470	472	474	476	486	490	486	481	481	495	05	30	602	00	56	457
487	493	488	507	504	497	506	501	496	524	05	35	627	12	22	458
492	492	492	493	505	505	509	512	513	534	06	22	663	00	01	486
505	504	503	497	497	502	503	511	507	532	06	06	660	13	30	487
512	502	488	488	486	492	502	502	504	539	05	30	661	19	00	481
520	517	508	500	499	511	513	517	507	549	05	58	679	18	32	492
498	496	499	506	508	514	515	520	525	540	06	14	643	16	22	492
505	511	511	512	513	506	512	514	509	533	04	55	624	14	00	494
516	519	521	518	515	517	520	522	521	543	05	30	640	00	01	496
539	536	535	533	534	535	534	536	536	566	06	06	658	00	30	517
543	535	532	537	538	538	537	537	539	581	05	52	722	17	00	531
548	548	546	548	551	543	553	559	546	575	05	38	675	23	59	528
521	520	519	522	519	519	521	520	519	551	06	20	659	01	15	514
539	536	534	531	532	534	535	536	536	562	06	02	654	01	12	517
545	538	540	541	548	550	557	549	543	575	05	56	679	00	38	530
521	511	503	506	522	528	522	522	525	565	05	56	679	16	45	501
544	531	526	525	529	539	545	537	535	560	05	32	653	17	45	524
534	535	533	532	534	535	534	533	527	560	06	22	689	00	34	525
525	510	495	497	502	502	510	512	512	541	05	56	595	16	50	489
533	534	534	534	530	530	532	527	526	559	06	22	675	00	50	505
543	544	542	541	537	534	529	521	519	571	05	45	736	01	10	504
520	519	517	518	516	510	513	515	519	540	05	22	644	20	10	508
517	518	516	511	514	518	522	526	526	552	05	15	656	18	14	509
494	509	509	506	506	509	520	536	520	547	05	30	655	15	18	478
469	479	484	485	494	511	512	508	510	527	07	18	621	14	25	465
508	509	507	509	512	512	515	516	516	541						171
536	533	531	532	532	532	532	532	533							Mean
445	461	463	476	481	473	476	482	487							Mean†
															Mean††

†Five international quiet days.

††Five international disturbed days.

ΔLoss of record; day omitted for means.

TABLE 10

## Hourly values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : October

39,000  $\gamma$  plus tabular quantities

Date	Hours G.M.T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1††	509	512	538	557	542	574	547	540	520	509	492	505	486	473	475
2	510	508	522	532	565	576	567	548	519	509	479	465	460	459	459
3	494	496	513	544	580	599	597	573	553	541	506	495	502	506	504
4	510	512	527	567	614	646	660	628	593	558	535	533	534	523	512
5	495	486	508	548	586	605	597	570	549	524	526	530	528	518	507
6††	508	502	517	577	644	575	532	497	467	544	537	449	384	385	322
7††	408	331	373	410	414	414	412	373	328	358	328	344	369	368	354
8	448	441	444	471	496	541	551	552	525	507	483	473	469	476	478
9	474	468	472	493	550	568	581	548	530	$\Delta$	$\Delta$	$\Delta$	$\Delta$	$\Delta$	$\Delta$
10	$\Delta$	$\Delta$	$\Delta$	$\Delta$	555	582	598	597	584	554	531	514	509	503	497
11	488	485	496	543	598	638	629	584	536	519	497	500	501	491	487
12†	506	504	506	528	571	606	634	631	617	593	570	553	541	532	528
13†	537	533	549	571	595	614	626	619	614	609	591	568	540	542	544
14†	542	536	543	581	620	638	641	628	615	601	586	573	562	553	544
15	535	533	551	577	626	647	668	636	616	605	595	565	531	502	491
16	503	511	531	554	583	600	615	614	586	572	557	518	530	510	506
17	513	522	542	582	623	662	673	649	624	598	573	553	567	528	523
18	521	499	513	555	574	618	619	609	573	538	504	487	485	491	482
19	519	498	512	537	558	582	591	596	586	573	557	543	526	515	514
20	515	514	526	550	581	600	600	578	549	532	524	524	526	510	491
21	510	513	528	563	596	621	629	608	578	551	539	534	535	534	527
22†	524	524	538	571	606	629	637	624	603	579	565	556	551	547	542
23†	539	537	556	593	640	668	675	651	617	559	565	561	561	554	551
24	534	531	548	583	621	649	653	637	609	585	567	560	552	548	544
25††	502	511	531	572	598	612	612	562	498	447	416	419	405	389	394
26††	441	443	462	473	472	501	488	487	471	466	448	436	412	426	408
27	486	470	462	478	494	509	534	558	555	544	500	464	434	452	466
28	488	492	497	540	548	559	514	510	496	483	464	429	423	423	412
29	487	484	507	535	561	572	567	553	525	513	488	452	462	462	47 0
30	495	502	506	516	545	556	564	558	518	506	500	495	464	464	47 2
31	490	498	511	526	547	587	589	562	550	533	520	514	512	508	510
Mean	502	498	512	543	572	593	594	577	551	536	518	503	495	489	483
Mean†	530	527	538	569	606	631	643	631	613	588	575	562	551	546	542
Mean††	474	460	484	518	534	535	518	492	457	465	444	431	411	408	391

†Five international quiet days.

††Five international disturbed days.

 $\Delta$ Loss of record; day omitted for means.

TABLE 10

Hourly values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

**Month : October**

39,000 γ plus tabular quantities

Hours G.M.T.										Maximum		Minimum		Range	Date	
15	16	17	18	19	20	21	22	23	Mean							
										Time	Mag.	Time	Mag.			
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	H.	M.	Y	H.	M.	Y	Y
460	464	468	476	497	497	514	515	512	508	04	54	589	13	52	430	159
447	434	455	475	480	483	488	491	495	498	05	15	588	15	41	426	162
505	501	509	511	514	513	516	513	508	525	05	15	614	00	04	490	124
497	468	437	462	515	443	469	467	486	529	05	42	668	19	55	420	248
495	499	507	517	517	523	526	517	522	529	05	20	619	01	14	482	137
280	266	258	332	366	342	345	341	406	432	04	01	678	16	49	226	452
388	372	389	427	414	422	449	467	447	390	22	15	476	00	50	289	187
466	460	458	457	472	475	474	477	473	482	06	30	565	01	20	428	137
Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
494	492	491	488	490	487	487	492	492	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
490	489	490	492	491	495	505	505	503	519	05	42	732	13	47	478	254
525	522	520	519	517	523	517	530	540	547	06	02	642	01	15	501	141
533	537	534	533	532	530	531	539	534	561	06	25	634	20	30	529	105
541	539	539	539	536	536	537	539	540	567	05	44	650	00	38	530	120
501	493	480	462	465	486	488	499	499	544	05	45	679	18	30	449	230
513	517	519	519	518	519	518	513	516	539	06	08	620	00	02	501	119
526	523	520	516	519	522	522	522	523	559	06	05	687	00	05	511	176
476	483	478	457	481	471	492	491	488	516	05	18	644	18	37	448	196
512	504	499	494	497	499	507	510	516	531	06	45	601	00	14	490	111
480	478	487	499	508	512	511	514	512	526	06	06	608	15	42	473	135
524	522	519	511	510	513	524	529	524	543	05	45	633	18	05	508	125
539	538	536	539	537	540	541	542	543	560	05	50	640	00	40	521	119
547	543	543	539	540	542	550	549	543	572	05	30	677	01	00	536	141
548	491	414	453	444	476	490	492	498	543	05	45	663	17	06	393	270
379	407	369	332	361	388	447	433	440	459	05	44	635	17	48	328	307
442	423	428	445	460	479	480	484	487	457	04	54	521	14	18	397	124
485	447	452	469	469	465	495	483	492	486	07	45	567	12	20	422	145
401	406	438	478	466	472	484	488	488	475	05	10	576	15	01	396	180
467	464	475	471	496	492	486	485	490	498	04	06	579	11	05	447	132
464	478	493	485	486	507	501	496	495	503	06	03	583	12	13	458	125
491	494	503	516	502	499	505	505	501	520	05	14	600	00	01	485	115
480	475	473	480	487	488	514	498	501	515						172	Mean
537	536	534	534	532	534	535	540	540								Mean†
390	386	382	402	420	426	447	448	458								Mean††

†Five international quiet days.

††Five international disturbed days.

**Δ** Loss of record; day omitted for means.

TABLE 11

Hourly values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : November

39,000γ plus tabular quantities

Hours G.M.T.																
Date	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
1	505	515	533	559	572	582	579	561	559	557	553	541	526	516	506	
2	518	524	543	566	594	572	595	566	536	515	508	507	503	495	501	
3	512	513	521	550	587	606	613	599	568	545	516	505	510	505	509	
4††	497	495	510	537	558	578	569	558	520	502	476	473	454	457	443	
5	494	508	528	557	574	589	579	567	553	524	512	508	502	493	491	
6	504	510	529	562	585	605	628	611	592	566	553	538	522	505	512	
7†	516	516	524	548	574	607	600	583	568	552	544	534	526	520	521	
8†	530	534	550	588	625	644	639	632	604	591	577	565	556	546	538	
9†	521	525	537	555	574	584	588	585	572	563	557	549	539	533	530	
10	529	535	557	589	612	619	620	621	628	611	595	585	563	548	547	
11	563	571	584	607	675	671	677	612	596	602	581	518	504	518	514	
12	525	524	529	557	574	591	594	600	593	582	568	555	545	541	563	
13††	425	435	445	443	423	339	372	297	221	203	221	283	280	235	257	
14††	394	368	392	414	431	469	484	469	471	475	467	456	437	435	432	
15††	438	450	495	533	544	549	520	523	506	516	488	486	472	470	467	
16††	430	391	372	284	410	382	413	394	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
17	Δ	Δ	Δ	Δ	534	542	554	554	540	517	503	487	483	481	469	
18†	466	467	478	498	522	540	539	534	521	511	503	504	496	487	486	
19†	495	508	534	562	599	618	606	580	563	546	535	555	548	535	521	
20	534	524	534	556	598	623	611	586	550	521	507	509	512	511	501	
21	523	529	552	583	616	631	613	564	504	457	460	480	463	458	449	
22	483	490	500	516	523	529	533	539	515	506	503	491	480	475	479	
23	502	509	529	550	568	573	575	557	551	536	525	511	505	502	494	
24	505	504	514	543	580	616	633	608	591	561	536	521	518	528	521	
25	521	508	591	513	508	515	510	516	518	499	490	470	476	477	464	
26	496	499	515	536	544	551	523	503	495	500	500	507	498	494	493	
27	507	512	529	553	574	588	572	567	544	523	526	528	527	516	501	
28	512	514	537	561	578	571	556	541	527	519	526	519	510	504	506	
29	516	526	545	573	600	616	616	609	586	564	549	534	531	525	522	
30	501	527	535	553	581	583	582	571	573	574	558	548	543	532	526	
Mean	501	505	524	545	568	577	576	559	540	526	516	510	502	495	493	
Mean†	506	510	525	550	579	599	594	583	566	553	543	541	533	524	519	
Mean††	438	437	460	482	489	484	486	462	430	424	413	424	411	399	399	

†Five international quiet days.

††Five international disturbed days.

Δ Loss of record ; day omitted for means.

TABLE 11

## Hourly values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : November

39,000γ plus tabular quantities

Hours G.M.T.									Maximum		Minimum		Range	Date		
Mean									Time Mag.		Time Mag.					
15	16	17	18	19	20	21	22	23								
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H.	M.	γ	H.	M.	γ	γ
499	500	508	513	510	510	510	513	511	531	04	49	592	15	30	497	95
501	594	597	504	509	515	519	520	514	534	04	36	608	13	03	489	119
510	582	507	510	512	514	510	502	499	534	05	54	616	22	45	495	121
475	465	458	465	492	489	486	487	488	497	05	10	601	14	20	432	169
493	494	495	496	498	500	502	502	503	519	04	45	595	13	30	488	107
414	515	516	516	514	512	524	522	520	541	06	01	633	12	55	502	131
520	523	524	524	526	526	529	529	530	540	04	56	614	00	37	514	100
535	531	530	529	530	527	525	522	520	561	05	15	649	23	15	518	131
528	530	529	528	529	527	526	530	529	544	06	05	598	00	01	520	78
543	541	542	544	545	551	554	556	560	571	07	22	651	00	01	528	123
514	513	516	518	519	533	525	525	518	561	03	47	707	11	36	493	214
558	553	544	477	400	327	414	467	442	526	07	25	607	20	00	355	252
257	257	297	347	423	355	361	371	402	331	01	01	518	08	15	57	461
446	439	440	460	445	451	451	450	442	442	06	28	526	01	37	347	179
467	428	409	392	414	423	417	459	460	472	02	25	574	18	46	386	188
Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
464	473	484	480	471	468	468	468	469	499	05	30	553	13	16	485	68
487	491	490	493	494	494	494	494	493	541	05	17	638	00	01	494	144
514	515	514	515	516	521	524	532	527	541	05	17	638	00	01	494	144
506	508	513	512	516	517	520	520	522	534	05	25	642	14	02	498	144
446	437	412	384	437	455	466	482	489	495	05	20	633	18	02	362	171
473	468	468	467	481	486	489	493	500	495	06	14	548	17	38	490	58
492	493	492	500	506	509	508	509	509	521	05	56	581	14	22	490	91
521	522	524	530	530	540	531	517	524	542	06	08	639	00	38	499	140
454	457	490	482	479	487	491	489	493	496	03	52	538	16	10	506	32
495	502	506	508	509	504	498	504	507	508	04	37	560	08	18	483	77
493	490	495	507	507	504	519	525	512	526	05	11	597	15	52	486	111
497	506	511	514	518	512	514	514	513	524	03	35	584	14	30	488	96
518	517	522	529	526	533	529	525	528	547	05	22	622	00	01	515	107
520	525	523	530	538	543	543	522	514								
492	496	496	493	497	495	499	503	502	517						135	Mean
517	518	517	512	519	519	520	521	520								Mean†
411	397	401	416	444	430	429	442	448								Mean††

†Five international quiet days.

††Five international disturbed days.

Δ Loss of record ; day omitted for means.



TABLE 12

## Hourly values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : December

39,000γ plus tabular quantities

Date	Hours G.M.T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1††	527	547	550	582	523	499	400	445	440	472	463	451	447	450	407
2††	455	464	485	497	524	524	516	522	528	523	510	512	495	487	470
3	498	502	514	534	541	559	567	563	560	553	537	523	516	510	509
4†	513	523	543	558	580	588	584	580	567	562	557	547	533	513	507
5	509	515	531	553	579	596	589	592	578	548	568	553	519	511	515
6	537	539	557	587	606	614	594	570	550	542	535	527	498	489	477
7	487	496	521	545	579	592	588	580	576	569	564	551	527	505	497
8	509	484	492	542	572	598	612	600	600	584	551	527	523	519	515
9	526	524	521	526	546	566	553	562	572	561	548	535	517	510	503
10	519	516	519	522	548	589	605	612	603	596	572	545	530	529	526
11†	529	527	536	563	593	624	641	630	619	589	561	536	524	514	512
12	525	525	529	541	555	583	601	591	589	581	557	535	523	522	517
13	505	494	498	514	538	559	552	533	520	521	521	520	507	502	510
14†	532	540	552	571	581	601	608	609	596	592	587	586	581	568	552
15††	537	534	536	540	563	585	587	580	556	529	500	461	431	416	403
16††	459	475	485	479	471	455	460	458	443	468	464	464	458	457	460
17†	496	500	513	523	543	546	550	547	540	529	526	524	518	516	505
18	525	529	543	548	563	570	556	519	478	505	483	488	485	477	474
19	515	519	525	547	566	579	566	516	501	510	517	517	518	520	514
20	529	529	539	554	573	582	566	537	509	507	510	507	514	513	507
21	517	514	529	569	591	595	584	573	560	543	528	531	536	529	521
22	512	509	517	548	569	575	558	530	515	514	511	519	518	516	522
23	512	513	529	564	591	605	599	571	541	513	510	510	511	505	508
24	529	524	541	577	614	623	606	581	589	549	535	540	536	516	506
25†	533	528	531	564	606	630	620	603	571	539	528	529	532	530	529
26	530	534	541	576	633	649	637	616	573	540	542	544	536	533	539
27††	550	551	564	590	612	643	685	642	587	552	542	527	483	455	434
28	478	480	489	509	544	569	573	537	526	502	500	488	505	500	483
29	505	502	512	519	548	573	584	571	545	527	509	517	518	506	499
30	506	509	520	546	582	593	598	577	449	512	520	526	519	510	495
31	509	508	517	549	585	607	610	608	548	506	488	509	509	509	501
Mean	513	515	525	546	568	583	579	566	549	537	527	521	512	504	497
Mean†	521	524	535	556	581	598	601	594	579	562	552	544	538	528	521
Mean††	506	514	524	538	539	541	530	529	511	509	499	483	463	453	435

†Five international quiet days.

††Five international disturbed days.

△Loss of record ; day omitted for means.

TABLE 12—*contd.*

## Hourly values of Horizontal Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : December

39,0000γ plus tabular quantities

Hours G.M.T.										Maximum		Minimum		Range		Date
Mean																
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.			
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ		
380	413	388	388	433	440	451	460	471	459	05 15	615	06 32	299	316	1††	
473	470	469	481	495	497	507	507	502	496	04 21	551	00 01	453	98	2††	
508	508	515	511	506	507	509	509	511	524	06 12	572	00 11	495	77	3	
501	507	502	499	499	503	508	508	508	533	05 15	596	15 17	498	98	4†	
512	511	510	514	510	520	522	532	532	538	05 29	603	16 34	504	99	5	
454	443	432	428	424	441	466	484	487	512	04 50	622	18 42	420	202	6	
490	486	490	507	512	514	534	511	520	531	05 43	605	16 15	484	121	7	
511	511	514	514	518	520	522	523	525	537	05 02	640	01 15	475	165	8	
515	510	498	506	520	519	516	515	515	528	07 30	583	16 58	491	92	9	
521	526	524	526	521	522	541	533	532	545	07 16	620	02 32	508	112	10	
516	521	526	531	533	535	535	529	526	552	06 05	650	13 19	509	141	11†	
511	499	484	501	507	500	500	512	515	533	05 58	610	17 21	481	129	12	
515	514	514	516	516	518	521	523	528	519	05 00	564	01 06	491	73	13	
541	532	534	535	537	540	539	542	541	562	06 50	616	00 07	529	87	14†	
391	374	355	371	401	398	420	459	449	474	05 09	595	16 49	349	246	15††	
464	467	471	479	485	488	487	489	490	470	06 25	511	06 51	414	97	16††	
503	508	511	513	510	519	526	524	530	522	05 38	562	00 01	495	67	17†	
459	438	435	471	492	503	501	504	507	502	05 15	608	16 31	429	179	18	
512	516	525	523	524	519	526	532	530	526	05 36	591	08 30	492	99	19	
513	515	518	509	514	541	523	518	523	527	05 06	588	09 36	498	90	20	
493	496	491	503	510	527	537	524	516	534	04 07	613	15 05	486	127	21	
516	515	511	511	518	521	524	520	517	524	04 25	588	01 28	503	85	22	
495	503	512	519	521	522	526	530	531	531	04 32	618	15 20	493	125	23	
514	519	520	521	523	528	527	532	536	545	05 15	626	14 22	500	126	24	
528	528	529	528	529	537	535	536	533	548	04 57	636	10 10	524	112	25†	
537	530	532	535	536	544	546	544	546	557	05 08	656	15 58	521	135	26™	
441	458	422	397	399	426	446	467	472	514	05 51	695	18 48	388	307	27††	
480	470	462	482	504	509	505	505	506	504	06 05	684	16 40	456	228	28	
487	490	478	487	494	496	496	500	501	515	05 38	591	17 12	476	115	29	
494	503	514	524	506	508	509	511	509	527	05 29	609	14 18	489	120	30	
501	495	488	496	513	505	503	503	501	524	06 26	621	09 50	482	139	31	
493	493	489	494	500	505	510	512	513	523				136		Mean	
519	519	520	521	522	527	529	528	528							Mean†	
430	436	421	423	443	450	462	476	477							Mean††	

† Five international quiet days.

†† Five international disturbed days.

△ Loss of record; day omitted for means.

TABLE 13

## Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month: July

2,000  $\gamma$  plus tabular quantities

Date	Hours G.M.T.															
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
1	296	303	296	288	280	273	256	245	264	274	279	287	288	287	281	
2	294	298	298	293	285	279	267	262	257	257	260	268	278	283	280	
3	295	298	298	295	308	303	301	290	283	278	278	279	287	286	283	
4	293	298	299	292	279	266	245	251	245	255	260	269	280	285	279	
5	296	299	299	293	292	289	284	277	266	257	269	267	277	279	279	
6	295	295	289	283	279	271	267	266	262	262	259	260	278	280	279	
7†	292	292	286	283	279	272	273	268	257	255	266	272	279	281	281	
8†	292	292	286	278	274	279	285	289	291	291	296	291	290	289	282	
9†	292	295	291	288	290	270	266	253	254	265	278	280	289	284	279	
10	291	292	290	290	290	282	279	279	278	277	273	273	277	278	279	
11	289	301	304	294	284	267	254	246	266	278	292	292	292	289	282	
12	292	296	290	279	276	271	265	262	267	266	267	278	282	282	280	
13	292	301	302	302	300	284	266	264	258	260	266	269	277	279	281	
14††	289	296	296	289	289	278	265	276	281	266	265	269	273	278	279	
15††	300	301	293	291	282	265	264	254	255	252	253	265	253	254	265	
16††	289	277	285	265	264	259	247	245	248	249	254	269	276	281	285	
17	293	297	290	289	287	276	275	275	271	276	287	288	288	286	282	
18	299	298	288	287	287	282	276	270	275	274	272	278	277	277	276	
19††	298	300	298	299	294	293	276	256	259	251	242	244	276	288	283	
20	293	295	288	287	287	280	287	288	289	293	294	288	287	288	282	
21	288	288	280	276	266	253	265	270	275	265	270	276	278	278	280	
22	290	292	284	272	259	252	248	253	264	280	284	277	276	278	278	
23	288	294	287	280	278	275	264	262	259	259	265	278	281	278	278	
24	288	293	295	294	294	294	294	295	295	295	293	287	278	276	276	
25†	288	290	283	273	266	253	253	265	272	276	271	277	285	285	281	
26	289	289	284	289	287	277	269	264	253	248	254	260	269	276	277	
27†	287	293	299	294	291	285	284	279	275	269	275	277	278	282	281	
28	289	291	290	277	271	267	266	269	265	263	269	272	275	278	281	
29	294	293	283	275	273	272	275	276	267	260	255	259	269	275	276	
30	289	295	285	289	273	269	260	258	254	253	255	254	259	276	278	
31††	289	287	295	299	300	289	282	272	264	259	264	263	269	275	277	
Mean	292	294	291	287	283	275	270	267	267	267	270	273	278	280	279	
Mean†	290	292	289	283	280	272	272	271	270	271	277	279	284	284	281	
Mean††	293	292	293	289	286	277	267	261	261	255	256	262	269	275	278	

† Five international quiet days.

†† Five international disturbed days.

Δ Loss of record ; day omitted for means.

TABLE 13

## Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time).

Month : July

2,000  $\gamma$  Plus tabular quantities

Hours G.M.T.									Maximum		Minimum		Range		Date	
Mean																
15	16	17	18	19	20	21	22	23	Time	Mag.	Time	Mag.				
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	H. M.	Y	H. M.	Y	Y		
280	280	284	291	290	285	287	291	292	282	00 36	306	07 07	244	62	1	
283	287	291	291	291	291	291	291	292	282	03 15	301	07 35	255	46	2	
284	287	289	289	290	290	289	291	291	290	03 50	309	08 30	277	32	3	
281	287	274	291	292	291	291	291	292	279	02 45	303	06 16	242	61	4	
281	284	289	290	291	291	287	286	291	284	01 30	302	09 08	256	46	5	
281	285	286	287	291	290	290	289	290	280	00 35	296	10 35	255	41	6	
283	285	287	289	289	287	287	290	291	280	00 01	292	09 00	255	37	7†	
282	285	288	289	289	289	289	290	291	287	09 45	297	04 27	273	24	8†	
280	284	285	289	290	289	289	289	289	282	00 35	297	07 25	246	51	9†	
280	284	290	290	291	291	288	286	286	284	00 34	294	10 00	272	22	10	
284	284	288	289	289	289	289	290	290	284	01 20	306	06 41	242	64	11	
284	286	291	292	292	292	291	291	291	282	00 50	297	06 25	256	41	12	
283	288	285	290	290	290	289	289	289	283	03 22	308	08 10	257	51	13	
288	283	288	281	289	293	300	300	302	284	21 34	319	09 24	263	56	14††	
271	277	288	281	279	288	305	293	289	276	21 12	315	09 35	248	67	15††	
288	288	287	289	293	290	290	291	291	275	00 02	302	06 05	242	60	16††	
287	288	290	288	288	288	289	289	289	286	00 45	299	08 25	268	31	17	
282	287	288	289	289	289	293	292	294	284	00 30	300	07 07	264	36	18	
283	286	289	288	292	292	287	288	288	281	00 50	301	11 15	240	61	19††	
282	287	288	288	289	283	283	288	290	288	22 30	304	05 00	280	24	20	
280	283	283	287	287	288	288	288	288	278	00 45	289	04 46	247	42	21	
280	281	283	287	286	286	287	286	288	277	00 37	297	05 35	247	50	22	
278	281	284	287	288	287	287	288	287	279	00 55	299	08 45	256	43	23	
278	280	284	288	288	287	288	284	288	288	02 25	299	13 00	275	24	24	
284	283	283	284	284	285	287	287	288	278	01 00	290	05 00	253	37	25†	
279	284	285	282	283	287	285	284	285	276	03 20	291	08 30	247	44	26	
281	282	283	288	288	288	287	289	288	284	01 35	300	09 00	269	31	27†	
284	285	285	289	288	285	288	290	290	279	01 35	294	08 35	261	33	28	
277	271	270	272	283	287	293	296	289	277	22 12	301	10 22	253	48	29	
278	278	281	283	287	285	289	289	289	275	00 28	301	08 35	252	49	30	
277	282	278	288	289	288	287	289	288	281	03 10	301	08 32	257	44	31††	
281	284	285	287	289	288	289	290	290	281						44	Mean
282	284	285	288	288	288	288	289	289								Mean†
281	283	286	285	288	290	294	292	292								Mean††

†Five international quiet days.

††Five international disturbed days.

ΔLoss of record; day omitted for means.

TABLE 14

## Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : August

2,000  $\gamma$  plus tabular quantities

		Hours G.M.T.														
Date		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1		288	288	287	291	289	289	283	267	255	252	256	258	270	277	284
2		284	288	289	282	278	272	267	259	252	248	252	260	266	272	274
3		284	286	282	283	281	273	269	269	269	273	273	277	283	280	279
4†		281	285	279	280	269	258	254	254	254	249	255	265	275	279	279
5†		287	289	283	285	286	280	274	269	267	269	269	273	275	276	278
6		286	288	284	285	285	270	259	261	260	257	263	274	285	284	279
7		286	287	280	275	269	262	261	263	262	261	262	263	269	276	277
8		287	292	287	287	281	264	255	256	249	261	262	258	268	274	274
9		293	295	288	286	284	275	271	275	288	293	293	283	283	288	283
10		296	299	301	300	296	283	264	254	250	248	259	264	274	280	274
11		290	295	294	288	286	294	286	276	272	270	265	262	270	275	280
12		287	299	305	314	308	295	286	282	284	288	288	281	270	275	277
13		290	292	286	275	271	271	270	262	252	251	254	262	269	275	278
14		289	294	283	274	270	259	245	253	262	266	264	265	272	275	276
15		288	288	283	282	276	269	264	264	263	259	263	263	269	275	276
16††		283	288	286	284	283	277	272	273	276	276	277	271	267	272	277
17††		299	301	283	267	287	253	282	275	247	259	277	281	282	290	287
18		299	303	285	271	267	265	259	259	270	265	260	271	275	273	277
19		295	295	289	285	283	282	272	272	282	275	269	271	273	277	277
20		295	297	289	281	272	259	242	247	263	277	277	282	279	277	275
21††		299	299	291	272	260	259	267	263	254	243	259	267	271	275	276
22		291	293	289	294	288	282	279	275	275	263	260	265	272	273	275
23		285	289	282	272	271	260	252	253	259	265	272	273	273	275	276
24†		287	294	287	272	264	257	248	242	247	251	257	263	270	272	276
25†		287	295	290	276	271	263	261	257	263	271	278	284	283	278	279
26†		288	295	296	294	282	272	261	250	255	265	272	277	278	277	279
27		289	300	300	296	283	266	253	253	261	265	272	272	277	279	284
28		290	292	292	294	297	289	283	272	271	273	277	280	280	273	272
29††		292	309	303	290	277	228	228	272	278	285	284	276	273	276	276
30††		288	298	290	274	261	262	260	271	268	278	286	285	291	283	280
31		289	295	289	289	292	288	276	272	272	268	278	278	274	276	276
Mean		289	294	289	284	280	270	265	264	264	265	269	271	275	277	278
Mean†		286	292	287	281	274	266	260	254	257	261	266	272	276	276	278
Mean††		292	299	291	277	274	256	262	271	265	268	277	276	277	279	279

† Five international quiet days.

†† Five international disturbed days.

Δ Loss of record ; day omitted for means.

TABLE 14

## Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : August

2,000  $\gamma$  plus tabular quantities

Hours G.M.T.									Maximum		Minimum		Range	Date			
15	16	17	18	19	20	21	22	23	Mean	Time	Mag.	Time			Mag.		
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	H.	M.	Y	H.	M.	Y	Y	
279	282	283	284	283	285	282	284	286	278	03	18	293	09	00	249	44	1
277	282	283	279	282	284	284	286	284	274	01	40	290	08	35	247	43	2
279	284	283	281	283	284	285	283	283	279	00	44	289	05	33	268	21	3
279	280	281	283	285	284	284	284	284	273	00	40	286	09	30	248	38	4†
280	281	284	284	284	286	285	285	286	280	00	42	291	07	35	264	27	5†
279	281	281	284	286	286	286	287	286	274	00	55	290	08	57	256	34	6
281	282	286	297	288	288	287	287	286	276	16	50	297	06	00	261	36	7
277	275	273	275	281	282	287	293	288	274	00	54	293	08	00	247	46	8
287	287	288	288	287	292	293	294	294	287	00	45	298	05	25	265	33	9
276	280	284	278	282	287	288	290	289	279	01	15	304	08	30	246	58	10
278	282	288	289	289	290	290	288	288	283	01	00	298	11	15	259	39	11
284	286	292	293	294	293	292	288	292	290	03	20	322	11	50	268	54	12
282	282	286	287	290	290	289	287	288	277	00	45	294	08	35	250	44	13
282	288	287	284	283	284	286	283	286	275	01	00	294	05	40	240	54	14
276	278	282	282	283	284	288	287	283	276	00	24	294	09	00	259	35	15
261	249	265	271	272	278	284	290	293	276	23	25	295	16	00	248	47	16††
287	277	277	277	275	276	287	306	305	281	22	18	319	07	50	243	76	17††
278	283	284	288	288	289	289	293	293	278	00	31	308	07	00	257	51	18
279	273	290	279	278	273	273	289	294	280	22	25	305	10	20	266	39	19
283	284	284	283	283	284	285	294	293	279	00	50	301	06	28	241	60	20
273	273	282	283	287	283	283	285	290	275	00	15	301	08	45	242	59	21††
275	279	279	282	287	285	284	284	283	280	03	18	297	09	45	259	38	22
277	279	279	284	283	284	283	283	284	275	00	45	290	06	20	249	41	23
275	276	276	281	281	283	283	283	284	271	01	00	295	07	00	242	53	24†
282	282	283	284	285	287	289	287	288	279	00	52	297	07	00	255	42	25†
280	280	284	285	286	286	284	288	288	279	02	15	297	07	00	249	48	26†
279	278	280	276	278	284	298	291	290	279	01	00	300	06	35	247	53	27
277	284	286	284	284	285	289	290	290	284	03	36	298	07	30	267	31	28
284	284	283	278	279	278	276	279	285	278	01	00	314	05	35	212	102	29††
284	290	291	291	290	290	291	291	289	283	00	43	300	06	00	259	41	30††
284	284	288	291	288	288	288	290	288	283	01	00	296	08	45	266	30	31
279	280	283	283	284	285	286	288	288	279						47		Mean
279	280	282	283	284	285	285	285	286									Mean†
278	276	280	281	282	281	285	291	292									Mean††

†Five international quiet days.

††Five international disturbed days.

Δ Loss of record ; day omitted for means.

TABLE 15

## Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : September

2,000  $\gamma$  plus tabular quantities

		Hours G.M.T.														
Date		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1†		291	295	289	283	283	273	263	269	272	283	285	283	278	278	279
2		290	294	284	270	259	248	241	246	247	259	270	273	278	272	271
3††		284	294	306	279	259	249	239	243	271	279	282	280	279	271	270
4††		283	292	283	279	259	239	243	226	209	232	249	270	268	268	275
5††		293	301	269	252	254	248	244	250	227	225	267	292	291	281	281
6		293	279	278	284	270	255	231	232	249	256	266	270	270	272	273
7††		292	286	266	245	233	229	221	223	235	249	254	265	259	273	277
8		286	291	277	263	249	235	220	219	218	226	244	255	266	267	267
9		283	285	279	268	268	267	255	244	248	255	260	262	266	266	272
10		283	289	289	280	272	258	244	243	254	265	266	265	266	266	268
11		285	273	271	264	254	250	242	237	242	249	256	262	262	266	268
12		278	283	278	262	248	252	248	242	242	252	259	258	256	265	266
13		281	283	272	259	254	252	252	253	255	264	263	259	263	265	266
14		276	288	277	264	248	240	230	233	246	252	253	254	260	268	268
15†		276	284	280	271	262	245	232	232	240	247	256	260	264	265	264
16†		276	283	276	258	241	222	206	206	219	240	247	252	254	261	265
17		278	283	278	270	270	252	241	253	265	275	278	276	269	265	266
18		266	271	265	264	247	235	229	229	226	238	242	258	265	267	270
19†		278	283	277	267	262	253	252	261	261	261	259	255	255	265	265
20		277	280	279	278	274	269	256	254	263	268	268	267	267	271	272
21		280	280	262	248	244	233	229	225	233	244	250	253	257	262	267
22		281	283	273	256	249	243	233	243	257	267	272	271	267	268	271
23		278	279	277	266	257	244	241	232	232	248	255	257	266	268	269
24		283	283	279	292	293	269	259	258	252	258	264	268	274	273	272
25†		280	281	284	279	272	257	237	237	242	248	256	263	268	269	269
26		279	285	284	269	257	244	227	220	219	231	245	256	264	269	272
27		274	274	286	282	273	256	245	243	238	246	255	258	268	270	272
28		279	280	269	269	268	261	255	250	251	247	249	258	268	269	269
29		281	282	281	277	273	258	247	243	245	249	247	247	256	262	257
30††		274	280	274	275	279	270	262	262	264	269	262	256	253	255	258
Mean		281	281	275	269	261	250	241	240	244	253	259	263	266	268	269
Mean†		280	285	281	271	264	250	238	241	247	256	261	263	264	268	267
Mean††		285	291	279	270	257	247	242	241	241	251	263	273	267	270	272

† Five international quiet days.

†† Five international disturbed days.

Δ Loss of record; day omitted for means.

TABLE 15

## Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : September

2,000  $\gamma$  plus tabular quantities

Hours G.M.T.										Maximum		Minimum		Range		Date
Mean																
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.			
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	H. M.	Y	H. M.	Y	Y		
282	286	286	287	284	284	286	286	288	282	01 00	295	06 00	260	35	1†	
273	282	298	286	285	289	294	284	295	274	22 55	297	06 07	238	59	2	
282	288	289	289	294	293	289	292	290	279	01 30	307	06 50	226	81	3††	
273	288	289	295	279	268	275	294	285	268	21 52	305	07 55	203	102	4††	
286	282	290	297	296	286	291	291	298	275	00 30	315	08 38	212	103	5††	
278	280	282	284	286	290	285	282	286	272	00 01	293	06 25	212	81	6	
273	279	277	285	280	279	281	279	280	263	18 20	293	06 30	220	73	7††	
267	273	273	275	281	279	280	280	280	261	00 42	295	08 15	214	81	8	
274	274	276	277	277	278	279	283	280	270	00 46	287	07 14	241	46	9	
271	268	266	272	272	276	282	284	284	270	01 20	290	06 20	242	48	10	
270	272	271	270	272	278	278	282	277	266	00 35	289	06 52	235	54	11	
266	267	272	278	278	278	278	278	280	265	01 00	287	07 15	243	44	12	
271	273	276	276	276	271	276	276	273	267	00 35	284	05 50	251	33	13	
270	274	275	276	276	276	274	275	276	264	00 45	289	06 52	229	60	14	
266	268	269	270	271	271	271	271	272	263	00 48	287	06 30	228	59	15†	
266	267	270	276	277	276	275	276	276	257	00 50	287	06 30	205	82	16†	
267	271	272	276	277	272	277	277	261	270	00 55	284	05 30	239	45	17	
267	270	272	278	277	277	277	277	260	23 58	279	05 58	224	55	18		
267	270	272	273	276	277	276	276	274	267	00 42	285	05 35	248	37	19†	
272	272	275	278	280	279	280	278	274	272	01 55	282	06 35	253	29	20	
266	266	268	274	281	279	274	277	278	260	19 23	285	06 54	224	61	21	
274	271	271	275	280	283	283	278	279	268	20 25	290	06 15	231	59	22	
271	263	274	278	279	279	278	278	277	264	23 41	285	07 45	231	54	23	
276	274	268	273	280	280	284	281	280	274	03 28	304	07 25	234	70	24	
270	273	275	279	276	278	279	278	279	267	00 30	285	06 10	234	51	25†	
272	274	274	279	274	274	272	273	273	262	01 15	287	07 15	218	69	26	
272	272	274	275	275	272	274	276	278	267	01 55	288	07 50	237	51	27	
268	270	271	271	274	275	276	280	280	267	01 00	281	09 35	245	36	28	
263	276	276	276	275	276	280	283	274	266	21 45	287	07 15	250	37	29	
264	270	273	275	280	281	281	275	275	269	20 26	288	11 30	250	38	30††	
271	274	275	278	279	278	279	280	279	267				58		Mean	
270	273	274	275	275	277	277	277	278							Mean†	
276	279	284	288	286	281	283	286	286							Mean††	

† Five international quiet days.

†† Five international disturbed days.

Δ Loss of record; day omitted for means.



TABLE 16

## Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : October

2,000  $\gamma$  plus tabular quantities

Date	Hours G. M. T.															
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
1††	277	280	267	250	233	234	239	239	245	240	253	249	261	268	263	
2	275	275	269	271	269	268	256	249	249	247	247	257	265	269	270	
3	281	279	273	269	268	259	257	256	257	253	246	253	267	270	271	
4	273	279	275	271	268	251	243	235	239	246	253	258	261	264	263	
5	281	271	270	270	260	246	245	248	257	264	270	268	264	269	268	
6††	265	271	271	266	254	232	230	251	268	283	272	232	233	256	234	
7††	288	274	282	251	235	234	234	246	259	259	258	274	281	272	270	
8	282	277	269	277	276	270	262	259	259	266	270	276	274	276	276	
9	275	282	269	257	251	245	235	238	253	259	256	256	263	269	269	
10	280	281	274	265	259	250	250	246	245	247	251	257	260	266	268	
11	275	283	282	276	270	253	233	224	240	251	256	262	263	264	269	
12†	275	280	282	287	286	270	257	252	250	248	251	256	259	266	269	
13†	275	274	276	281	277	260	245	251	257	253	254	258	262	269	271	
14†	275	275	272	269	269	258	256	259	259	253	251	253	257	265	268	
15	274	275	276	273	270	248	248	258	266	270	267	257	249	254	259	
16	275	275	273	277	279	275	276	271	267	266	260	258	259	263	270	
17	275	275	272	270	250	244	235	235	235	235	240	247	257	263	266	
18	273	278	285	297	299	278	260	251	247	246	247	251	257	267	266	
19	272	275	270	271	270	260	259	259	254	253	259	258	259	266	271	
20	275	279	282	282	279	272	270	270	279	261	260	263	266	266	261	
21	272	275	271	275	275	270	271	271	277	259	253	251	255	260	260	
22†	272	276	273	273	252	247	244	240	239	246	251	259	263	270	271	
23†	275	279	277	270	260	247	237	236	237	247	250	256	261	266	270	
24	273	274	277	273	268	259	259	261	260	261	264	268	264	264	267	
25††	279	279	279	284	273	259	248	235	236	240	241	249	252	260	268	
26††	273	272	273	278	278	279	273	271	272	264	260	261	261	253	264	
27	278	278	272	274	272	261	260	259	248	243	237	247	250	271	276	
28	272	272	267	273	253	259	248	250	252	247	241	244	256	262	260	
29	276	280	284	276	272	259	256	258	258	260	249	243	260	270	272	
30	273	272	270	274	279	272	266	258	249	261	264	264	253	264	272	
31	272	276	272	271	253	260	260	256	255	258	260	260	264	272	272	
Mean	275	276	274	272	268	257	253	250	254	254	255	256	260	266	267	
Mean†	274	277	274	275	269	256	248	248	248	249	251	256	260	267	268	
Mean††	275	275	274	266	256	248	245	253	256	257	257	253	258	262	260	

†Five international quiet days.

††Five international disturbed days.

ΔLoss of record; day omitted for means.

TABLE 16

## Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : October

2,000  $\gamma$  plus tabular quantities

Hours G.M.T.										Maximum		Minimum		Range		Date
										Mean						
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.			
$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	H.M.	$\gamma$	H. M.	$\gamma$	$\gamma$		
270	275	275	280	283	281	283	281	275	263	21 16	301	05 30	232	69		1††
268	268	280	282	281	281	280	277	281	268	18 10	288	07 30	246	42		2
273	270	276	276	276	275	274	273	273	268	00 38	280	10 10	244	36		3
259	253	250	276	279	262	274	274	281	262	22 05	283	07 00	235	48		4
266	270	276	289	278	280	278	276	282	264	22 28	293	05 40	240	53		5
228	245	246	287	287	271	271	270	298	259	23 25	319	11 30	204	115		6††
282	270	282	294	281	282	283	283	281	249	17 30	305	05 35	224	81		7††
271	270	272	274	281	277	275	275	271	272	19 15	287	08 00	259	28		8
277	274	274	273	282	284	280	280	282	266	19 15	287	06 30	232	55		9
269	270	271	271	271	271	270	275	275	264	00 52	282	08 00	245	37		10
270	271	272	274	274	274	276	275	275	265	01 25	286	06 11	223	63		11
270	270	270	276	274	275	271	277	280	269	03 10	290	08 40	247	43		12†
271	270	271	274	275	275	275	277	277	268	03 20	286	06 13	226	60		13†
270	270	271	274	275	274	274	275	275	267	00 34	277	09 45	251	26		14†
271	271	270	267	270	282	275	279	276	267	19 25	283	05 45	247	36		15
272	275	277	277	275	275	273	272	273	271	03 25	283	10 55	257	26		16
270	271	271	272	272	272	271	272	273	261	00 43	278	05 46	233	45		17
267	272	271	266	275	270	282	273	272	265	03 40	306	09 00	246	60		18
271	271	271	271	271	272	273	279	273	267	21 25	282	09 00	253	29		19
265	269	273	282	282	282	276	277	276	273	03 22	283	10 07	259	24		20
261	261	261	261	262	262	267	268	262	265	21 20	283	11 00	251	32		21
271	270	271	276	273	276	275	273	276	264	01 45	278	08 00	239	39		22†
270	271	272	274	273	273	278	274	273	264	01 00	280	07 00	236	44		23†
271	248	231	262	261	278	283	278	278	266	20 15	284	16 45	222	62		24
261	278	261	255	271	280	296	278	279	264	20 30	308	06 50	229	79		25††
283	271	273	280	283	284	279	278	277	272	14 55	292	09 50	252	40		26††
270	264	272	276	273	272	284	272	276	266	20 55	290	10 12	234	56		27
261	270	280	288	275	276	279	279	277	264	18 00	296	10 05	240	56		28
272	273	272	283	272	272	272	272	272	265	01 40	285	10 50	240	45		29
268	274	279	272	272	279	272	272	272	269	19 50	282	07 55	248	34		30
264	271	274	276	270	271	272	272	272	267	00 32	279	08 12	252	27		31
268	269	270	275	275	275	276	275	276	266					48		Mean
270	270	271	272	274	275	275	275	278								Mean†
265	268	267	279	281	280	282	278	282								Mean††

†Five International quiet days.

††Five International disturbed days

△ Loss of record; day omitted for means.

TABLE 17

Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : November

2,000  $\gamma$  plus tabular quantities

		Hours G.M.T.														
Date		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1		273	274	271	266	260	248	252	254	254	255	255	252	259	264	267
2		274	276	272	270	271	260	268	273	261	250	255	259	261	270	273
3		273	275	273	278	273	271	268	267	260	255	250	255	262	270	273
4††		271	264	261	267	271	258	248	247	248	243	248	256	255	271	267
5		273	273	272	267	262	261	259	259	252	250	254	260	260	266	270
6		277	277	273	271	266	260	249	243	243	240	248	255	259	261	271
7†		272	272	272	277	273	265	256	260	250	248	252	258	261	268	272
8†		274	276	278	281	284	273	273	266	255	253	249	255	260	263	266
9†		273	272	267	277	274	273	273	272	269	262	261	253	261	265	267
10		273	273	265	268	273	271	268	265	266	260	253	253	253	261	272
11		274	274	274	281	284	277	280	268	256	250	244	236	249	262	262
12		273	273	272	268	268	266	273	266	253	253	257	260	261	272	283
13††		255	278	275	260	293	266	267	247	248	243	235	277	285	255	262
14††		278	277	283	287	293	286	280	269	256	255	261	260	260	267	267
15††		269	271	263	249	252	238	238	248	243	249	250	259	260	272	272
16††		265	251	245	259	277	267	273	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
17		Δ	Δ	Δ	Δ	269	261	261	259	261	260	260	253	259	261	261
18†		265	267	262	261	255	255	253	259	256	260	261	260	260	263	271
19†		273	272	266	260	257	269	250	255	261	257	256	261	260	261	260
20		273	263	259	262	262	253	238	238	238	248	260	261	262	263	262
21		272	273	273	267	257	243	238	249	244	254	260	257	249	261	256
22		268	268	273	281	285	281	281	281	273	274	270	254	254	262	268
23		274	273	268	265	263	263	262	257	262	258	257	252	258	263	263
24		270	270	273	271	270	263	252	240	241	246	251	253	252	263	262
25		271	264	264	266	265	269	278	283	275	263	271	263	264	266	264
26		275	270	270	266	262	253	262	270	275	265	263	264	263	266	269
27		275	276	271	265	265	265	261	264	257	260	263	257	257	264	260
28		267	266	265	267	266	261	266	267	266	265	266	262	261	266	267
29		271	274	266	265	265	255	253	253	254	255	258	255	256	264	265
30		267	267	266	272	278	279	274	267	267	267	261	259	261	266	266
Mean		272	272	270	269	270	265	263	260	257	255	258	257	259	265	267
Mean†		271	272	269	271	269	267	261	262	258	256	257	255	260	264	264
Mean††		268	272	270	266	277	262	258	253	249	248	248	263	265	266	267

† Five international quiet days.

†† Five international disturbed days.

 $\Delta$  Loss of record ; day omitted for means.

TABLE 17

## Hourly values of Vertical Force, 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : November

2,000  $\gamma$  plus tabular quantities

Hours G.M.T.										Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23	mean	Time	Mag.	Time	Mag.		
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
266	271	274	278	274	274	273	273	276	265	18 15	279	05 00	248	31	1
273	272	277	279	279	279	278	277	273	270	20 00	283	09 00	249	34	2
273	273	272	277	274	273	273	261	272	269	03 10	279	10 00	249	30	3
283	272	272	273	284	278	273	273	273	265	15 02	288	09 35	240	48	4††
272	272	272	273	274	274	274	273	276	267	00 35	277	09 15	248	29	5
272	272	272	272	273	272	277	272	272	264	00 35	279	09 00	238	41	6
271	272	272	273	273	272	272	272	273	267	03 20	280	09 00	248	32	7†
268	267	272	273	273	273	273	273	272	269	03 20	285	10 00	249	36	8†
272	272	272	273	273	273	273	273	273	270	03 15	279	11 00	254	25	9†
272	273	273	274	274	273	273	274	274	268	18 05	278	11 00	253	25	10
263	265	272	273	273	278	273	273	271	267	03 52	291	11 00	235	56	11
274	273	273	248	233	239	262	262	260	263	21 58	309	20 00	232	77	12
262	272	285	298	309	269	273	275	284	270	18 38	340	10 00	221	119	13††
273	268	272	278	271	273	273	273	268	272	03 38	297	09 46	249	48	14††
262	260	261	261	274	273	272	287	284	261	22 10	321	05 35	237	84	15††
Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	16††
269	271	273	272	269	271	269	267	269	Δ	Δ	Δ	Δ	Δ	Δ	17
271	272	272	273	272	272	272	273	273	265	18 00	273	06 00	254	19	18†
260	261	263	268	269	272	272	273	268	264	00 01	273	05 00	248	25	19†
265	266	268	268	271	271	273	268	269	261	00 01	273	06 45	237	36	20
262	257	250	245	274	275	275	274	274	260	19 08	286	07 14	243	43	21
262	263	263	266	274	274	273	274	274	271	03 20	286	11 17	251	35	22
263	264	265	270	270	270	269	271	271	265	00 01	275	06 40	251	24	23
262	263	264	264	264	267	264	262	268	261	00 01	275	07 00	240	35	24
263	264	277	274	269	274	274	268	271	270	07 25	288	11 30	256	32	25
269	265	275	275	275	266	266	272	270	269	08 00	275	05 00	252	23	26
261	263	266	271	267	265	271	275	265	265	00 45	279	08 07	253	26	27
266	271	273	270	271	267	268	268	267	267	13 36	277	05 00	258	19	28
266	266	268	272	267	268	267	266	266	263	00 40	277	06 00	253	24	29
265	267	267	269	278	274	268	262	256	269	19 16	287	11 00	260	27	30
268	268	270	271	272	271	271	271	271	266					39	Mean
269	267	270	272	272	272	272	273	272							Mean†
270	268	272	278	284	273	273	277	277							Mean††

† Five international quiet days.

†† Five international disturbed days.

 $\Delta$  Loss of record ; day omitted for means.

TABLE 18

## Hourly values of Vertical Force 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : December

2,000  $\gamma$  Plus the tabular quantities.

		Hours G.M.T.														
Date		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1††		262	266	263	256	277	284	293	293	291	279	268	255	256	267	251
2††		266	266	266	274	280	284	291	293	287	278	266	267	260	268	267
3		269	269	270	275	279	280	269	263	258	255	254	255	257	267	268
4†		274	270	269	273	275	269	269	275	274	267	255	246	255	256	262
5		273	272	264	268	268	268	272	270	270	268	266	266	254	260	256
6		279	279	272	271	270	264	269	281	281	276	271	258	245	252	257
7		276	274	270	277	275	270	270	269	269	268	261	259	257	257	259
8		268	267	268	268	258	257	268	281	262	258	252	257	257	262	268
9		275	270	280	271	275	264	258	268	258	256	257	257	257	262	261
10		270	275	273	276	277	264	252	247	246	246	251	253	254	260	264
11†		270	271	270	274	271	259	247	238	235	236	245	248	256	258	259
12		268	270	269	270	271	269	263	258	251	247	247	251	257	264	264
13		270	270	268	268	270	264	258	264	264	258	257	258	258	264	270
14†		271	271	271	272	265	258	248	251	246	246	252	258	259	260	258
15††		265	266	275	287	283	271	264	252	235	229	229	234	239	250	257
16††		270	270	270	282	284	293	293	293	286	265	256	259	263	270	271
17†		269	270	274	265	263	264	263	263	263	258	256	259	264	257	268
18		263	267	261	254	255	246	245	244	257	245	240	249	257	257	258
19		269	263	259	263	258	259	263	269	271	269	257	256	258	268	259
20		259	259	257	257	250	246	252	261	274	274	269	257	258	261	257
21		259	264	257	249	233	232	238	245	257	258	263	257	257	257	257
22		258	264	261	253	245	233	233	251	264	264	251	257	257	258	259
23		263	268	259	247	233	223	232	240	253	267	267	259	256	256	257
24		262	263	258	244	227	214	220	233	237	234	244	251	251	246	249
25†		261	261	258	251	240	221	220	227	235	245	246	251	251	255	256
26		257	268	264	253	245	227	221	223	238	251	263	257	247	256	259
27††		265	268	258	253	251	244	223	203	215	224	234	239	232	234	235
28		263	264	257	259	256	245	238	240	240	238	245	246	257	257	252
29		259	265	258	256	245	233	232	222	222	233	239	252	258	257	257
30		263	268	263	257	240	221	221	221	223	234	250	250	251	251	250
31		258	263	262	267	263	244	229	228	222	234	255	258	247	256	256
Mean		266	268	265	264	261	254	252	254	254	253	254	254	254	258	258
Mean†		269	267	263	267	263	254	249	254	251	250	249	247	255	258	255
Mean††		266	269	265	269	275	275	273	267	263	255	251	251	252	258	256

†Five international quiet days.

††Five international disturbed days.

ΔLoss of record; day omitted for means.

TABLE 18

## Hourly values of Vertical Force 1960

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

Month : December

2,000  $\gamma$  Plus the tabular quantities

Hours G.M.T.									Maximum		Minimum		Range	Date		
Mean																
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.			
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ		
249	268	262	266	284	278	279	277	278	271	06 20	321	15 15	248	73	1††	
268	263	268	278	280	279	280	279	273	274	07 00	296	12 30	258	38	2††	
268	269	272	270	269	270	270	270	273	268	04 15	280	10 00	251	29	3	
263	268	268	268	268	272	273	272	273	267	06 22	279	11 10	245	34	4†	
267	267	268	273	269	276	276	279	279	269	19 52	280	12 00	251	29	5	
253	256	257	258	261	270	281	281	280	268	07 00	281	12 25	239	42	6	
259	263	269	280	277	271	281	268	269	269	21 00	287	12 30	256	31	7	
268	268	269	269	269	269	269	270	273	266	06 47	282	10 15	246	36	8	
268	267	261	268	270	270	269	269	269	266	01 35	281	09 00	256	25	9	
264	269	269	269	271	269	276	270	270	264	03 30	282	08 30	246	36	10	
264	264	269	270	270	269	270	264	263	260	03 28	276	08 30	234	42	11†	
264	259	258	271	270	266	269	271	270	263	18 20	286	09 30	246	40	12	
270	269	269	270	270	270	270	270	271	266	23 00	271	10 00	257	14	13	
258	258	259	264	265	265	268	269	269	261	03 10	274	09 00	242	32	14†	
256	251	247	258	269	263	270	272	270	256	21 32	292	08 58	228	64	15††	
271	271	271	275	274	272	270	271	269	274	04 35	284	09 45	252	32	16††	
265	263	268	269	269	269	269	265	268	265	01 00	269	09 00	256	13	17†	
255	247	252	269	273	270	269	268	268	257	18 05	280	09 35	238	42	18	
261	263	268	264	264	262	268	268	263	264	07 45	275	11 00	252	23	19	
263	263	262	258	263	270	258	259	262	260	08 23	280	04 40	246	34	20	
246	256	255	263	267	270	269	263	258	255	20 00	270	04 45	228	42	21	
257	257	257	257	262	263	263	263	263	256	01 25	268	05 00	233	35	22	
251	258	261	262	262	261	264	268	264	255	01 00	269	04 52	222	47	23	
256	257	257	256	257	259	258	259	261	247	01 00	264	05 00	214	50	24	
256	257	257	257	257	258	258	258	257	250	20 02	268	05 15	216	52	25†	
259	257	257	257	257	263	262	259	263	254	01 20	270	06 00	220	50	26	
247	257	243	238	245	257	257	265	263	244	01 00	270	07 00	202	68	27††	
252	251	250	259	268	264	259	258	258	253	19 15	269	06 47	234	35	28	
252	256	252	258	259	262	262	263	263	251	01 00	268	07 30	221	47	29	
252	258	262	267	256	258	257	258	257	249	01 00	269	05 00	221	48	30	
257	257	256	259	268	259	258	259	258	253	03 07	270	08 00	221	49	31	
260	261	261	265	267	267	268	267	267	260						39	Mean
261	259	263	266	266	263	264	266	264							Mean†	
259	263	258	263	270	270	271	273	271							Mean††	

† Five international quiet days.

†† Five international disturbed days.

Δ Loss of record; day omitted for means.

TABLE 19  
PRINCIPAL MAGNETIC STORMS

Observatory	Greenwich Date  1960	Storm Time		Sudden commencements			C-figure Degree of Ac- tivity (iv)	Maximal activity on K-scale 0 to 9			Ranges			
		G.M.T. of Begin- ning	G.M.T. of ending (i)	Type (ii)	Amplitude(iii)			Green- wich Day	Green- wich 3 hr. index	K-index	D.	H.	Z.	
					D.	H.								Z.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		hr. mt.	d. hr.			γ	γ		γ				γ	γ
Astrophysical Observatory.	July, 14	. . 04 48 16 19	S.C.	1	40	13	ms	15	..	..	9	272	72	
	August, 16	. . 14 06 18 09	S.C.	<1	30	12	ms	17	..	..	8	285	69	
	August, 19	. . 16 14 21 10	S.C.	<1	27	17	m	20	..	..	6	217	63	
	August, 29	. . 00 19 30 11	S.C.	1	29	22	ms	30	..	..	7	320	98	
	September, 2	. . 11 57 03 14	S.C.	<1	15	6	m	3	..	..	9	219	75	
	September, 4	. . 02 28 06 00	S.C.	<1	30	13	s	5	..	..	11	438	109	
	October, 6	. . 02 36 07 23	S.C.	1	46	15	s	6	..	..	9	458	121	
	October, 24	. . 14 52 26 16	S.C.	<1	33	13	ms	25	..	..	6	316	72	
	November, 12	. . 13 45 14 11	S.C.	2	48	24	s	13	..	..	9	487	127	
	November, 15	. . 13 02 16 18	S.C.	<1	27	11	ms	16	..	..	5	305	92	
	November, 21	. . 06 31 22 09	S.C.	1	37	13	ms	21	..	..	4	264	39	
	November, 30	. . 19 08 1st Dec.	S.C.	1	31	20	ms	1st Dec.	..	..	5	289	68	
December, 7	. . 18 02 08 16	S.C.	<1	28	14	m	7	..	..	4	170	36		

The following symbols and conventions have been used according to recognised practice :—

- (i) Approximate time of ending of storm construed as the time of cessation of reasonably marked disturbance movements in the traces.
- (ii) S.C.=sudden commencement; (...)=Gradual commencement.
- (iii) Signs of amplitudes of 'D' and 'Z' taken algebraically; (D=reckoned negative being westerly),  
(Z=reckoned positive being vertically downwards).
- (iv) Storm described by three degrees of activity: (m)=for moderate (when range is less than 250 γ).  
(ms)=for moderately severe (when range is between 251 γ and 400 γ).  
(s)=for severe (when range is above 400 γ).

**IONOSPHERIC DATA**



Characteristic : fo F2

TABLE 1

Latitude : 10°.2N

Unit : Mc

Ionospheric Data

Longitude : 77°.5E

Month : July 1960

75.0°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	F	F	F	F	F	F	7.1 <sub>F</sub>	9.4	10.6	10.7	10.4	10.0
2	6.5	F	F	u4.6 <sub>F</sub>	3.9	4.1	7.0	9.9	10.9	11.0	10.7	9.8
3	9.8	9.8	9.1	8.1	7.2	6.3	7.8	9.8	11.4	11.4	11.6	10.7
4	9.5	8.6	7.6	7.1	7.0	6.9	8.6	10.1	10.8	11.2	10.9	9.5
5	8.7	7.5	7.2	7.1	7.0	5.7	7.4	9.7	11.7	12.1	11.9	11.8
6	u9.5 <sub>s</sub>	9.0	8.2	u7.2 <sub>s</sub>	6.7	6.4	7.8	10.2	11.2	11.6	11.3	10.5
7	u9.4	FS	7.3 <sub>F</sub>	6.8	6.5	4.9	7.3	9.5	10.5	9.8	9.5	9.5
8	F	F	F	u7.1 <sub>FS</sub>	6.2	4.8	7.1	9.0	9.8	9.2	8.9	9.3
9	F	F	F	F	6.8	5.5	7.3	9.5	10.2	9.7	8.8	8.7
10	u7.1 <sub>s</sub>	5.7	4.7	4.3	4.5	4.5	7.2	10.1	10.8	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C
14	8.5	6.6	5.9	5.6	5.0	4.6	6.8	J9.7 <sub>s</sub>	10.0	10.3	9.4	9.2
15	J7.2 <sub>s</sub>	5.7	3.7	F	F	F	6.0	9.0	10.3	10.6	10.2	9.8
16	9.2	8.5	7.8	7.0	4.7	4.0	7.4	9.5	11.3	11.2	J12.0 <sub>R</sub>	10.4
17	u8.3 <sub>F</sub>	8.0	7.6	u7.2 <sub>s</sub>	7.5	5.1	7.4	10.5	12.0	12.5	12.4	11.8
18	F	F	F	F	F	4.1	7.2	9.6	11.0	12.0	11.4	10.6
19	8.4	7.6	7.0	6.8	6.7	6.2	8.0	10.1	11.4	12.2	12.2	11.2
20	u9.4 <sub>s</sub>	8.0	u6.4 <sub>SH</sub>	4.6	3.7	3.5	6.4	9.6	u10.6 <sub>s</sub>	10.8	9.8	9.6
21	6.6	u5.2 <sub>s</sub>	4.4	3.8	3.3	2.6	6.2	9.8	10.6	10.9	10.6	9.8
22	7.4	F	F	F	F	u5.5 <sub>F</sub>	6.8	9.4	10.3	9.4	8.6	8.6
23	F	F	F	F	F	F	u6.8 <sub>F</sub>	9.7	10.8	11.0	9.8	9.2
24	F	F	u6.8 <sub>F</sub>	6.2 <sub>F</sub>	6.1	4.9 <sub>F</sub>	6.8	10.0	10.9	11.1	10.9	10.0
25	8.5 <sub>F</sub>	7.2	5.1	u4.7 <sub>F</sub>	F	4.6	7.2	9.6	10.6	10.8	9.8	9.4
26	6.6	6.0	4.7	3.8	3.6	2.9	5.9	8.5	9.8	10.4	9.8	9.4
27	6.8	6.1	6.4	6.2	4.0	2.9	6.5	8.5	10.0	10.2	10.2	10.1
28	9.5	7.7	7.1	6.4	6.7 <sub>F</sub>	5.1	6.3	8.3	9.8	10.3	C	8.8
29	10.8	u7.0 <sub>s</sub>	4.9	3.9	3.3	2.7	6.1	8.8	10.4	10.5	9.9	10.0
30	8.8	6.7	4.8	F	F	F	u7.4 <sub>F</sub>	9.3	10.4	10.4	9.4	9.4 <sub>HI</sub>
31	9.0	7.8	6.3	5.7	5.9	4.6	6.3	9.5	11.0	11.2	11.3 <sub>H</sub>	10.5 <sub>HI</sub>
Count	22	19	21	21	21	24	28	28	28	27	26	27
Median	8.6	7.5	6.4	6.2	6.1	4.7	7.1	9.6	10.6	10.8	10.3	9.8
Mean	8.4	7.3	6.3	5.9	5.5	4.7	7.0	9.5	10.7	10.8	10.4	9.9

Sweep 1.0 Mc, to 25.0 Mc. in 27 seconds

Characteristic : fo F2

TABLE 1

Latitude : 10°2N

Unit : Mc

Ionospheric Data

Longitude : 77°5'E

Month : July 1960

75°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
9.7	9.6	10.5	11.5	11.8	12.0s	12.7	12.7	11.1	F	F	F	1
C	C	C	10.6	10.7	11.1	11.9	12.5s	12.6	10.9	10.0	9.9	2
10.5	10.4	10.6	11.6	12.3	12.1	12.3	12.7	11.7	10.7	10.3	11.2	3
9.8	9.5	9.8	10.1	10.6	11.3	11.8s	11.7	11.4	10.6	10.5	9.9	4
10.9	10.3	10.1	10.8	10.9	11.6	11.4	10.4	10.4	10.7s	9.6	9.9	5
10.5	10.7	10.8	10.6	10.7	10.9	11.1s	10.9	10.1s	10.5	9.1	10.0	6
9.6	9.3	9.7	9.9	9.6	9.7	10.8	10.3	F	F	F	F	7
10.3	10.6	11.8	12.7	12.5	12.8	12.6	11.7s	11.3	9.8	8.7	8.4	8
9.1	9.3	9.7	10.2	11.1	11.8	12.1	11.6	9.6	8.7	7.8	7.8	9
C	C	10.8	10.8	10.8	11.2	C	C	C	C	C	C	10
C	C	C	C	C	C	C	C	C	C	C	C	11
C	C	C	C	C	C	C	C	C	C	C	C	12
9.8	10.7	10.6	10.5	10.6	11.1	10.3	10.5	10.8s	9.1	8.9	9.4	13
9.2	8.6	9.1	10.0	10.4	10.6	12.0s	12.3	10.5	9.6	9.6	8.6	14
						12.0s	10.2	10.3s	F	9.4	11.5	15
9.7	9.8	9.8	10.4	10.5	10.4	10.8s	10.4s	10.2	9.0	F	10.8	16
11.0	10.5	10.6	11.0	11.4	11.4	11.5	10.4	10.0	8.7	10.5	F	17
10.8	11.0	11.6	12.0	12.4	13.5	12.8	11.0	10.6	10.2	9.6	9.4	18
10.4	9.8	10.0	10.2	10.5	11.8	12.5	11.2	10.5	9.6	7.8	8.8	19
9.6	10.5	10.7	11.5	12.4	13.1	13.6	11.8	11.5	10.8s	7.8	10.2s	20
10.4	10.6	11.0	10.7	11.0	11.7s	11.5	11.4	10.4	10.8s	9.6	8.2	21
9.4	9.7	11.0	11.4	11.8	11.8	12.1	11.8	F	F	F	F	22
9.8	9.9	10.0	10.3	10.8	11.4	11.8	11.8	10.4	F	F	F	23
10.2	10.6	11.1	11.2	11.7	12.2	12.0	11.2	F	F	F	F	24
9.4	9.9	10.5	10.6	11.1	12.2	12.8	12.4	10.3	8.5	8.0	10.3	25
9.2	8.8	8.6	9.0	9.5	9.6	10.3	10.7	10.4	9.4	9.0	8.3	26
9.7	9.4	9.8	10.4	11.1	11.8	11.0	10.4	10.8	F	10.6	10.3	27
8.9	9.2	9.8	9.7	9.5	10.4	11.4	11.2	10.6	10.8	9.1	10.1	28
10.4	10.9	10.7	10.4	9.9	9.5	10.4	10.6	10.6	F	10.7	10.4	29
9.8	9.9	10.0	10.1	10.0	10.5	10.8	11.5	11.3	11.0	9.7	10.2	30
9.3	9.5	9.5	10.0	10.8	11.2	11.2	10.8	10.3	9.9	9.8	10.5s	31
26	26	27	28	28	29	28	28	24	21	22	22	Count
9.8	9.9	10.5	10.6	10.8	11.4	11.6	11.2	10.4	9.7	9.6	9.6	Median
9.9	10.0	10.3	10.6	10.9	11.3	11.6	11.2	10.6	9.7	9.4	9.3	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF2

Unit : Mc

Month : July 1960

TABLE 1—*contd.*

Ionospheric Data

75.0°E Mean Time

Latitude : 10°02'N

Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	F	F	F	F	F	F	8.4	10.5	10.7	10.6	10.2	9.9
2	6.1	F	u4.9s	4.2	3.7	5.5	8.7	10.6	11.1	11.0	10.2	C
3	9.7	9.4	8.7	7.5	6.3	6.6	9.2	10.5	11.5	11.6	11.2	10.6
4	8.9	8.0	7.5	7.1	7.0	7.5	9.4	10.6	11.5	11.3	10.2	9.4
5	8.5	7.5	7.1	7.0	6.4	6.0	8.8	10.8	11.9	12.1	12.1	11.3
6	u9.3s	8.5	u7.6s	7.0	6.3	6.7	9.1	10.5	11.0	11.5	10.8	10.4
7	u8.8F	7.7F	6.7	6.5	6.1	5.6	8.8	10.3	10.2	9.6	9.5	9.6
8	F	F	F	6.7	5.5	5.5	8.9	9.6	9.5	9.1	9.2	9.8
9	u6.7F	F	F	u6.7F	6.5	5.7	8.5	10.1	10.3	9.0	8.7	8.8
10	6.3	5.2	4.5	4.4	4.6	5.5	8.5	10.7	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C
14	6.9	6.1	5.7	5.2	4.8	5.4	8.3	9.7	10.6	9.8	9.2	9.5
15	7.0	4.2	3.2F	F	E	4.0	7.6	10.3	10.6	10.6	10.0	9.5
16	8.2	8.5	7.8	5.7	4.2	5.3	8.6	10.6	12.0	12.0	11.0	9.8
17	u7.9s	8.2	u7.2s	u7.6s	6.0	5.7	9.3	11.0	12.8	12.4	12.0	11.4
18	F	F	F	F	u6.1s	4.7	8.5	10.9	12.0	11.6	10.7	10.7
19	8.0	7.0	6.8	6.8	6.5	6.6	9.0	10.8	12.0	12.0	12.0	10.8
20	8.5	u7.2s	5.2	4.2	3.8	4.1	8.4	u10.2s	11.0	10.6	9.4	9.8
21	5.8	4.8	4.2	u3.2F	2.9	4.3	8.3	10.3	10.8	10.8	9.7	10.0
22	F	F	F	F	u6.0F	5.4	8.4	10.2	9.9	8.9	8.5	8.9
23	F	F	F	F	F	F	u7.5F	10.4	10.9	10.4	9.3	9.3
24	F	F	u6.5F	6.0	5.5	5.1	8.4	10.2	11.1	11.1	10.0H	10.0
25	7.9	6.0F	4.8	F	F	5.1	8.3	10.3	10.8	10.2	9.6	9.4
26	6.3	u5.3s	4.1	3.8	3.1	4.0	7.4	9.1	10.1	10.2	9.5	9.2
27	6.4	6.1	6.4	5.5	3.3	4.2	7.6	9.6	9.9	10.2	10.4	9.6
28	8.5	7.1	6.7	F	6.4	4.4	7.8	9.5	10.0	9.4	9.1	9.2
29	8.7	5.9	4.3	3.5	3.9	4.0	7.8	9.6	10.4	10.1	10.1	9.9
30	8.1	5.4	F	F	F	F	8.4	9.6	10.4	10.0	9.5	9.5
31	8.7	6.7	5.9	6.1	5.5	4.6	7.8	10.1	10.8	11.3	11.4H	9.7
Count	22	20	21	20	24	25	28	28	27	27	27	26
Median	8.0	6.8	6.4	6.0	5.5	5.4	8.4	10.3	10.8	10.6	10.1	9.8
Mean	7.8	6.7	6.0	5.7	5.2	5.3	8.4	10.2	10.9	10.6	10.2	9.8

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF2

Unit : Mc

Month : July 1960

TABLE 1—*contd.*

Ionospheric Data

75°0'E Mean Time

Latitude : 10°.2N

Longitude : 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
9.5	10.1	10.7	11.7	11.8s	12.6	12.8	12.2	10.6F	9.7	F	6.9	1
C	C	C	10.8	10.8	11.7	12.7	12.6	11.8	10.4	10.0	9.9	2
10.3	10.5	10.9	12.2	12.1	11.9s	12.8	12.8	11.0	10.5	10.8	10.5	3
9.6	9.5	9.7	10.4	10.8	11.5	12.0	11.7	10.6	10.6	10.2	9.5	4
10.6	10.4	10.6	10.9	11.5	11.5	11.0	10.1	10.1	9.9	9.9	C	5
10.6	10.8	10.7	10.3	10.9	10.8	11.3	10.3s	10.5	9.2	9.6	10.7F	6
9.4	9.4	9.8	9.8	9.4	10.5	10.6s	9.8	F	F	F	F	7
10.4	11.0	12.5	12.5	12.6	12.7	12.3	11.4	10.7	9.3	8.5	10.8F	8
9.3	9.4	10.0	10.7	11.5	12.0	11.8	10.8	9.2	8.0	7.9	7.7	9
C	C	10.8	10.8	10.7	C	C	C	C	C	C	C	10
C	C	C	C	C	C	C	C	C	C	C	C	11
C	C	C	C	C	C	C	C	C	C	C	C	12
10.2	10.6	10.6	10.4	10.5	10.3	10.5	10.0s	9.2	9.0	9.2	9.6	13
9.0	9.0	9.6	10.1	10.6	11.7s	12.4	11.4	9.8	9.4	9.5	7.9	14
					10.5	10.6s	F	10.3F	S	11.7s	10.8	15
9.7	10.7s	10.2	10.4	10.6	10.8s	10.6s	10.2s	10.0F	F	F	10.0F	16
10.6	10.6	10.8	11.4	11.2	11.6s	11.2	10.4F	10.8F	10.2F	10.6F	F	17
10.7	11.6	11.8	12.0	13.0	13.3	11.8	10.8	10.4F	10.0	9.6	9.0	18
10.0	9.9	10.2	10.3	10.8	12.6	11.7	10.4	10.6	8.7	8.3	10.6s	19
9.8	10.6	11.2	12.3	12.6	13.7	13.0	11.2	11.2	8.3	10.5s	10.2s	20
10.6	10.7	10.9	10.9	11.4	11.8s	11.6s	10.2	10.1	10.2	9.0	7.6	21
C	10.1	11.4	11.7	11.5	12.2	11.6	10.8F	F	F	10.8F	F	22
9.8	10.4	10.2	10.7	10.9	11.7	11.8	11.1	10.6F	F	F	F	23
10.4	10.9	11.1	11.4	11.9	11.6H	11.7	F	F	F	F	10.0F	24
9.8	10.7	10.2	11.0	11.5	12.6	13.7	11.2	9.4F	8.2	7.7	6.9	25
8.9	8.9	8.6	9.1	9.6	9.8	10.6	10.6	9.9	9.6F	8.8	7.6	26
9.6	9.5	10.2	10.6	11.4	11.2	11.0	10.1	F	9.8	10.5	10.3	27
9.0	9.6	9.8	9.5	9.8	10.8	11.4	10.6	11.2	9.7	10.0	10.3	28
10.6	10.8	10.5	10.2	9.6	10.1	10.6	10.8	10.1	F	10.1	9.9	29
9.7	10.0	9.9	10.1	10.0	10.8	10.8	11.6	11.4	10.1	9.7	9.7	30
8.9	9.2	9.6	10.4	11.0	11.1	11.2	10.4	9.6	9.6	9.9	S	31
25	26	27	28	29	28	28	26	24	21	23	22	Count
9.8	10.2	10.5	10.7	10.9	11.6	11.6	10.8	10.1	9.6	9.6	9.2	Median
9.9	10.2	10.5	10.8	11.0	11.5	11.5	10.8	10.2	9.5	9.4	8.9	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF1

TABLE 2

Latitude : 10° 2' N

Unit : Mc

Ionospheric Data

Month : July 1960

75°E Mean Time

Longitude : 77° 5'

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	L	L
6								L	L	L <sup>H</sup>	L <sup>H</sup>	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11							C	C	C	C	C	C
12							C	C	C	C	C	C
13							C	C	C	C	C	C
14							C	C	C	C	C	C
15							C	C	C	C	C	C
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21							L	L	L	L	L	L
22							L	L	L	L	L	L
23							L	L	L	L	L	L
24							L	L	L	L	L	L
25							L	L	L	L	L	L
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
31								L	L	L	L	L
Count							..	..	..	..	..	1
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF1

Unit : Mc

Month : July 1960

TABLE 2

Ionospheric Data

75°E Mean Time

Latitude : 10° 2' N

Longitude : 77° 5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	A	A	A							1
C	C	C	A	A	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
												5
L	L	L	L	L	L							6
L	L <sub>LH</sub>	L <sub>LH</sub>	L	L	L							7
L	L <sub>LH</sub>	L <sub>LH</sub>	L	L	L							8
L <sub>LH</sub>	L	L <sub>LH</sub>	L	A	L							9
C	C	L	L	L	L	C						10
C	C	C	C	C	C	C						11
C	C	C	C	C	C	C						12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
L	L	L	L	L	A	L						31
1	..	..	..	..	..	..						Count
..	..	..	..	..	..	..						Median
..	..	..	..	..	..	..						Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic foF<sub>1</sub>

Unit : Mc

Month : July 1960

TABLE 2—*contd.*

Ionospheric Data

75°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	L
2								L	L	L	L	C
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	L	L
6								L	L	L <sup>H</sup>	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	C	C	C	C
11								C	C	C	C	C
12								C	C	C	C	C
13								C	C	C	C	C
14								L	L	L	L	L
15								L	L	L	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	u5.4L
22							L	L	L	L	L	L
23							L	L	L	L	L	L
24							L	L	L	L	L	L
25							L	L	L	L	L	L
26							L	L	L	L	L	L
27							L	L	L	L	5.4	L
28							L	L	L	L	L	L
29							L	L	L	L	L	L
30							L	L	L	L	L	L
31							L	L	L	L	L	L
Count							..	..	..	..	1	1
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF1

TABLE 2—*contd.*

Latitude : 10°2'N

Unit : Mc

Ionospheric Data

Longitude : 77°5'E

Month : July 1960

75°E Mean Time

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	5.6	A	A	A								1
O	C	C	A	A								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L								5
L	L	L	L	L								6
L <sub>LH</sub>	L <sub>LH</sub>	L	L	L								7
L <sub>LH</sub>	L	L	L	L								8
L	L	L	A	L								9
C	C	L	L <sub>LH</sub>	L								10
C	C	C	C	C								11
C	C	C	C	C								12
L	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	L	A	L								16
L	L	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
C	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L								26
L	L	L	L	L	L							27
L	5.8	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
L	L	L	L	L	L							31
..	2	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : fo E  
Unit : Mc  
Month : July 1960

TABLE 3—*contd.*  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							2.7	A	A	A	A	A
2							2.6	A	A	A	A	C
3							2.7	3.1	A	A	A	A
4							2.7 <sub>H</sub>	A	A	A	A	A
5							2.8	A	A	A	A	A
6							u2.5 <sub>R</sub>	A	A	A	A	A
7							A	A	A	A	A	A
8							A	A	A	A	A	A
9							u2.5 <sub>A</sub>	A	A	A	A	C
10							..	A	C	C	C	C
11							C	C	C	C	C	C
12							C	C	C	C	C	C
13							C	C	C	C	C	C
14							u2.4 <sub>R</sub>	A	A	A	A	A
15							..	A	A	A	A	A
16							..	u3.1 <sub>R</sub>	A	A	A	A
17							u2.4 <sub>R</sub>	A	A	A	A	A
18							A	A	A	A	A	A
19							A	A	A	A	B	A
20							u2.4 <sub>R</sub>	A	A	A	A	A
21							A	A	A	A	A	A
22							A	A	A	A	A	A
23							..	A	A	A	A	A
24							2.1	3.0	A	A	A	A
25							..	A	A	A	A	A
26							A	A	A	A	A	A
27							R	A	A	A	A	A
28							2.4	A	A	A	A	A
29							2.5	A	A	A	A	A
30							2.5	3.1	A	A	A	A
31							R	A	A	A	A	A
Count							14	4	..	..	..	..
Median							2.5	..	..	..	..	..
Mean							2.5	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo E

Unit : Mc

Month : July 1960

TABLE 3—contd.

Ionospheric Data

75°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	A	A	A	A							1
C	C	C	A	A	A							2
A	A	A	A	A	..							3
A	A	A	A	3.3	A							4
A	A	A	A	A	2.5							5
A	A	A	A	A	..							6
A	A	A	A	A	A							7
A	A	u3.5R	u3.6H	A	..							8
A	A	A	A	A	u2.7R							9
C	C	A	A	A	..							10
C	C	C	C	C	C							11
C	C	C	C	C	C							12
A	A	A	A	A	A							13
A	A	A	A	A	..							14
			u3.8R	A	A							15
A	A	A	A	A	..							16
A	A	A	A	A	..							17
A	A	A	A	A	..							18
A	A	A	A	A	..							19
A	A	A	B	3.4	2.2							20
A	A	A	A	A	A							21
C	A	A	A	A	..							22
A	A	A	A	A	A							23
A	A	3.9	3.5	3.1	A							24
A	A	A	A	A	A							25
A	A	A	A	A	A							26
A	A	A	A	A	A							27
A	A	A	A	A	..							28
A	A	A	A	A	A							29
A	A	A	A	A	A							30
A	A	A	A	A	A							31
..	..	2	3	3	3							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : July 1960

TABLE 4  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								8.0	10.0	10.4	12.0	12.0
2				5.8				9.0	11.4	12.0	12.0	12.4
3								G	7.4	16.0	18.0	11.8
4				3.2			G	G	9.8	11.0	12.4	12.6
5								8.0	G	G	12.6	12.2
6							G	G	9.5	11.8	11.8	11.6
7		U5.4s		4.2			6.5	9.8	11.4	11.6	12.2	12.6
8	10.4	9.2					3.2	9.4	10.2	11.0	12.3	13.2
9	3.1							9.8	10.6	11.8	12.4	12.6
10		6.4	3.5	7.4				8.4	10.8	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C
14	5.7	3.2	3.5			U4.4s		6.6	9.8	10.8	12.0	10.8
15							3.0	8.0	10.6	11.0	11.6	12.0
16								G	11.0	12.0	12.0	12.0
17							G	6.6	4.0	9.0	11.6	12.0
18		2.2		7.0	3.2			9.0	11.2	11.0	12.2	12.0
19	2.2	2.4		2.0			G	7.0	9.8	12.0	13.0	13.0
20		4.1						6.6	8.8	11.0	12.6	13.0
21												
22	6.0	4.4	3.6	4.4	5.0	6.8	G	10.0	10.0	11.0	13.0	12.0
23	6.8	6.4	3.2	6.0				8.8	10.6	12.0	12.6	12.4
24			4.2	6.8			G	8.8	10.8	11.0	14.6	12.0
25	9.0	2.8	6.8	7.6				G	G	11.2	13.2	11.8
26								8.4	11.7	12.0	12.8	13.0
27							G	12.4	10.8	11.6	13.2	12.6
28	11.4	4.8	2.0	5.0			G	7.1	10.0	10.3	11.2	12.4
29	2.6							10.0	9.4	12.0	C	12.6
30	2.8							7.8	11.4	9.8	12.4	12.6
31								7.0	9.2	11.8	11.8	12.6
31		5.0	4.7	2.7				3.3	8.0	10.8	11.6	12.3
Count	10	12	9	13	3	1	11	28	28	27	26	27
Median	5.8	4.6	3.5	5.0	..	..	G	8.0	10.0	11.0	12.4	12.4
Mean	6.0	4.7	3.8	5.2	..	..	..	8.2	9.9	11.4	12.6	12.3

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : July 1960

TABLE 4

Ionospheric Data

75°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
12.0	12.0	13.0	19.0	23.0	23.0	13.0	10.0	5.0	u6.8s	9.0	7.0	1
C	C	C	15.0	14.0	18.0	9.0	7.6	8.0	8.8	9.4	..	2
12.8	12.6	13.0	12.0	10.2	6.2	11.0	7.0	5.2	7.8	3.0	..	3
12.4	12.0	12.0	10.6	8.4	11.0	3.8	..	..	5.0	8.0	..	4
12.0	10.0	11.8	11.0	8.0	G	7.0	7.0	..	..	..	..	5
12.1	12.2	12.2	11.0	9.8	G	u6.6s	3.1	u6.3s	4.1	4.5	6.2	6
12.3	12.6	11.4	11.6	10.5	7.9	8.9	3.4	1.8	..	2.7	8.6	7
11.8	10.8	8.8	7.4	8.4	6.8	4.3	4.5	3.8	4.8	3.6	..	8
12.4	12.1	12.5	17.0	17.7	G	4.5	u4.4s	..	4.0	7.6	..	9
C	C	12.3	10.6	9.6	7.8	C	C	C	C	C	C	10
C	C	C	C	C	C	C	C	C	C	C	C	11
C	C	C	C	C	C	C	C	C	C	C	C	12
9.2	10.0	11.0	11.6	8.0	u15.4s	12.2	8.8	u9.0s	u8.8s	6.6	u8.0s	13
11.8	11.6	12.0	9.6	7.0	13.0	S	10.6	u4.8s	8.6	8.9	..	14
..	..	..	..	..	11.4	u11.0s	4.4	..	u4.0s	4.3	4.7	15
12.0	11.6	u11.6s	20.0	20.0	12.0	u8.4s	4.2	u8.6s	8.0	3.0	3.6	16
12.6	12.6	13.0	12.4	9.6	7.0	6.0	4.8	4.4	u6.0s	4.6	10.0	17
12.0	11.0	12.0	11.0	9.2	8.0	..	..	3.0	2.4	1.8	..	18
12.2	12.0	11.8	10.3	14.0	17.0	13.0	4.0	4.6	4.0	4.0	..	19
12.4	12.0	11.0	G	G	3.5	..	5.0	3.6	3.2	2.7	u7.0s	20
12.0	12.0	12.4	12.0	11.0	7.0	4.2	6.0	5.0	5.6	11.4	4.0	21
12.6	12.8	10.8	11.0	8.6	9.0	..	..	..	..	5.6	7.8	22
12.0	13.2	12.6	12.2	12.0	15.4	12.6	11.2	7.0	3.4	3.8	..	23
12.2	11.0	11.0	6.2	5.2	G	5.4	..	..	4.2	2.6	..	24
12.6	15.0	12.6	12.0	15.6	16.8	11.6	u7.4s	6.8	5.4	..	4.0	25
13.1	12.4	12.2	15.6	12.0	14.8	12.0	12.8	8.0	u6.6s	..	..	26
12.6	12.0	12.2	11.4	9.4	11.5	8.2	6.8	4.8	7.0	6.6	9.0	27
12.7	12.8	12.6	10.8	8.4	9.4	11.8	7.8	u9.6s	u6.8s	3.2	..	28
12.2	12.6	12.6	10.8	8.8	9.4	9.0	4.0	3.6	4.2	4.6	6.8	29
12.0	12.4	11.8	10.2	8.7	7.7	4.6	..	3.5	4.4	..	..	30
12.5	12.6	11.4	11.6	7.7	10.8	12.8	6.4	7.0	2.6	..	..	31
26	26	27	28	28	29	24	23	22	25	23	13	Count
12.2	12.0	12.0	11.2	9.5	9.4	9.0	6.4	5.0	5.0	4.5	7.0	Median
12.2	12.1	11.9	12.0	10.9	11.2	8.8	6.6	5.6	5.5	5.3	6.7	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo Es  
Unit : Mc  
Month : July 1960

TABLE 4--(contd.)  
Ionospheric Data  
75°E Mean time

Latitude 10°2'N  
Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	1.8						G	9.0	10.0	11.4	12.4	12.4
2							G	12.0	11.0	11.4	12.8	C
3							G	G	9.2	18.0	12.6	12.0
4							G	8.6	9.0	11.8	12.6	12.4
5							G	9.0	8.0	8.0	11.0	10.0
6							G	7.8	11.0	11.3	12.2	11.7
7	8.6						10.2	10.8	10.8	12.4	12.3	12.6
8	11.3	4.2				2.3	8.3	10.9	11.6	11.8	12.4	11.6
9	3.6						6.8	10.9	11.4	12.1	12.4	12.4
10		4.6	3.4				..	10.8	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C
14	u5.8s	6.8			4.0	3.2	G	8.2	10.8	11.8	12.0	11.5
15							6.8	8.8	11.8	12.0	11.7	12.2
16							..	8.5	10.0	12.4	12.0	12.2
17				4.4			G	3.8	9.0	11.0	11.0	11.4
18	2.2		4.6	4.1			3.5	9.8	11.0	13.0	12.0	12.0
19	2.0						6.0	8.2	11.0	11.0	12.0	12.2
20							G	8.4	10.6	12.0	12.4	12.6
21				5.0			u7.0R	9.4	11.0	12.8	12.6	12.0
22	4.6	4.0	4.4	7.8			7.6	10.2	11.8	12.4	12.4	13.0
23	6.6	4.2	3.4	7.2			9.0	9.8	11.4	14.8	16.2	12.8
24			u5.6s	1.7			3.2	4.1	10.0	12.8	12.8	12.0
25	5.7	u7.0s	5.4	7.6		6.4	..	10.8	12.0	12.8	12.4	12.6
26							8.2	12.6	11.2	12.0	12.6	12.8
27							G	8.6s	10.0	11.4	11.8	12.2
28	8.2	4.7	5.8	4.6			G	8.4	11.2	12.4	11.8	13.2
29							7.6	9.6	10.6	12.4	12.6	12.4
30							G	G	9.6	11.6	11.8	12.2
31	4.4	6.7	5.0	5.4			G	6.8	7.8	11.6	11.8	11.7
Count	12	8	8	9	1	3	25	28	27	27	27	26
Median	5.2	4.6	4.8	5.0	..	..	G	8.9	10.8	12.0	12.4	12.2
Mean	5.4	5.3	4.7	5.3	..	..	7.0	9.1	10.5	12.2	12.3	12.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo Es

Unit : Mc

Month : July 1960

TABLE 4—(contd.)

Ionospheric Data

75°E Mean time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
12.0	14.8	19.0	22.0	23.0	13.4	13.0	10.6	u7.0s	u7.0s	6.0	4.0	1
C	C	C	17.0	16.0	13.0	9.0	4.0	9.0	10.0	5.0		2
11.8	12.0	11.4	11.6	12.0	9.8	9.4	3.2	7.0	7.8	3.0		3
12.0	12.0	12.0	10.0	G	10.0	4.4			3.4	5.0		4
12.0	12.0	11.0	10.8	9.8	G	8.0						5
12.4	12.4	10.9	10.4	7.8	4.6	u4.7s	2.4	u4.6s	4.3	5.3		6
12.4	12.7	11.1	10.8	11.0	9.4	7.8		2.0		4.8	6.6	7
10.8	9.6	G	8.4	7.6	7.6	4.6	4.0	u4.6s	3.9	3.4	3.7	8
12.6	12.6	12.0	19.8	6.6	G	3.6				3.9		9
C	C	12.4	10.8	8.3	C	C	C	C	C	C	C	10
C	C	C	C	C	C	C	C	C	C	C	C	11
C	C	C	C	C	C	C	C	C	C	C	C	12
9.6	9.0	10.2	11.2	7.8	u12.0s	u9.4s	u9.1s	u8.8s	S		6.7	13
12.4	12.0	11.2	8.0	9.0	u12.0s	u6.0s	3.2	6.8	8.8	10.8		14
					13.0	8.7	3.8	3.8	3.0	4.7	u6.8s	15
12.2	11.6	18.0	22.0	16.0	u10.0s	u8.0s	u6.2s	u9.1s	S	3.0	2.0	16
12.2	19.0	12.4	12.2	8.0	6.0	3.4	3.8	7.0	u6.0s	9.0	4.0	17
10.2	12.0	11.4	10.2	8.2			2.0	2.2	4.2	3.0		18
12.3	12.0	11.2	13.4	17.0	10.0	8.0	4.0	4.0	2.2	4.6	8.0	19
12.0	12.0	10.0	B	3.8	3.0		4.4	4.2		3.6		20
12.4	13.0	12.0	11.0	8.0	7.0	9.0	2.2	7.0	9.0	2.2	5.2	21
C	12.2	9.4	10.6	8.6	7.9				2.6	7.0	7.6	22
15.6	12.0	12.2	14.4	15.0	13.8	10.0	7.4	4.2	4.6	u5.2s	u5.0s	23
12.0	10.4	5.0	G	5.8	4.0	2.2			2.5		7.4	24
15.0	12.8	12.2	13.2	16.6	12.0	11.8	u4.8s	u5.0s	u5.6s			25
12.6	11.8	12.0	11.2	9.8	14.0	u12.0s	9.6	8.0	u6.0s	7.0	2.8	26
12.2	11.8	11.6	10.7	8.6	7.6	8.6	4.5	8.8	4.2	6.7	6.6	27
12.6	12.2	10.8	10.4	8.0	9.2	13.6	11.6	7.6	4.7			28
12.0	12.8	11.6	11.0	10.4	9.0	7.0	3.8	4.0	2.0	3.2		29
12.4	11.6	11.6	10.4	6.7	5.6	4.2	5.9	5.8	2.4	5.8	2.2	30
12.2	11.4	10.6	8.8	8.4	10.6	10.8	9.0	5.8	2.2	1.8		31
25	26	27	27	29	27	25	22	23	23	23	15	Count
12.2	12.0	11.4	10.8	8.6	9.4	8.0	4.2	5.8	4.3	4.8	5.2	Median
12.3	12.2	11.7	12.3	10.3	9.4	8.0	5.4	5.9	5.0	5.0	5.2	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fb Es

Unit : Mc

Month : July 1960

TABLE 5

Ionospheric Data

75°E Mean time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								2.9	3.4	3.8	4.0	4.1
2				2.0				2.9	3.9	3.8	4.0	4.2
3								G	3.4	4.2	5.0	4.2
4				2.1			G	G	3.4	3.8	4.0	4.2
5								3.1	G	G	4.1	4.2
6							G	G	3.6	3.8	4.0	4.2
7		1.7		1.6			2.1	3.0	3.4	3.8	4.0	4.3
8	1.9	1.4					2.1	3.0	3.4	3.7	3.9	4.8
9								2.9	3.4	3.8	4.0	4.2
10		2.2	2.1	2.4				2.9	3.5	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C
14	2.7	2.5	2.0			1.7		2.8	3.4	3.6	4.0	4.1
15							2.4	3.3	3.3	3.8	4.0	4.3
16								G	3.4	3.8	4.0	4.1
17			1.5				G	2.8	3.4	3.6	4.0	4.0
18				1.7	1.9			2.9	3.4	3.9	4.0	4.2
19	1.8	1.6		1.7			G	3.0	3.6	4.0	5.0	5.0
20								2.8	3.2	3.6	4.0	4.0
21				1.6				3.0	3.4	3.8	4.0	4.2
22	3.0	1.9	1.6	1.7	2.1		G	2.9	3.4	3.8	4.0	4.0
23	1.9		1.4	1.5				2.9	3.2	3.8	4.0	4.2
24				1.9			G	G	G	3.7	4.0	4.4
25	2.8	2.3	2.1					2.9	3.4	3.7	4.0	4.0
26								3.6	3.4	3.8	4.0	4.2
27							G	2.9	3.3	3.6	3.8	4.0
28	3.4						G		3.3	3.7	C	4.0
29								2.9	3.5	3.6	4.0	4.2
30	2.2							2.8	3.3	3.6	3.9	4.0
31			2.2	1.8				2.8		3.6	3.9	4.0
Count	8	7	7	11	2	1	11	27	27	27	26	27
Median	2.4	1.9	2.0	1.7			G	2.9	3.4	3.8	4.0	4.2
Mean	2.5	1.9	1.8	1.8				3.0	3.4	3.8	4.1	4.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : FbEs

TABLE 5

Latitude 10°2'N

Unit : Mc

Ionospheric Data

Longitude 77°5'E

Month : July 1960

75°E Mean time

12	13	14	15	16	17	18	19	20	21	22	23	Date
4.7	4.2	4.8	7.4	9.0	10.5	3.2	3.2	2.0	2.2	2.3	2.3	1
C	C	C	5.0	5.8	6.0	2.8	2.8	3.0	2.7	2.8		2
4.3	4.1	4.2	4.0	6.0	3.4	4.8	2.4	2.0	2.9	2.1		3
4.3	4.2	4.0	3.9	3.5	3.9	2.8	..	..	2.0	..		4
4.2	4.2	4.0	3.7	3.3	G	2.1	1.8	..	..	..		5
4.3	4.2	4.0	3.7	3.4	..	2.2	1.6	2.2	1.9	1.8	2.1	6
4.2	4.2	4.0	3.7	3.8	3.1	3.2	1.6	..	..	..	3.4	7
4.2	4.3	4.0	3.6	3.3	2.9	2.8	1.3	1.2	2.4	2.0		8
4.2	4.2	4.0	4.3	5.2	G	2.5	..	..	1.7	2.4		9
C	C	3.8	3.6	3.5	2.7	C	C	C	C	C	C	10
C	C	C	C	C	C	C	C	C	C	C	C	11
C	C	C	C	C	C	C	C	C	C	C	C	12
C	C	C	C	C	6.4	6.2	5.0	4.6	3.2	3.0	2.8	13
4.1	4.0	3.9	4.3	..	5.1	2.8	3.6	2.6	3.0	2.8		14
4.3	4.2	4.0	3.7	3.3	3.5	3.8	2.6	..	2.6	2.4	2.7	15
4.2	4.0	3.9	5.0	5.2	4.4	2.7	1.8	3.0s	3.0	2.0	1.8	16
4.0	4.2	4.4	4.2	3.4	2.9	2.0	1.7	2.0	2.8	1.8	2.2	17
4.2	4.2	4.4	3.8	3.5	2.8	..	..	1.6	1.6	1.6		18
4.2	4.0	3.9	3.8	4.0	5.8	2.8	2.0	3.0	2.0	1.9		19
4.1	4.0	4.0	G	G	3.0	..	..	1.9	..	1.6	2.8	20
4.0	4.0	4.0	3.7	3.4	3.0	2.2	2.0	2.1	2.6	2.1	1.6	21
4.2	4.1	4.0	3.6	3.5	3.2	..	..	..	..	1.5	2.0	22
4.2	4.2	4.0	4.2	4.0	5.8	5.0	3.5	2.4	2.0	1.9		23
4.1	4.0	4.2	4.5	4.6	G	2.2	..	..	1.8	1.9		24
4.2	4.1	4.1	3.6	5.2	8.1	2.6	2.2	2.6	2.5	..	2.4	25
4.2	4.0	4.0	3.8	4.6	4.2	3.0	2.4	2.2	2.8	..		26
4.0	4.0	3.9	3.6	3.4	3.4	2.0	1.8	1.6	1.7	2.4		27
4.1	4.2	3.8	3.6	3.2	2.8	5.0	4.0	2.8	2.9	2.2		28
4.2	4.0	4.0	3.8	3.2	3.4	3.3	1.4	2.0	..	1.7		29
4.0	4.0	4.0	3.4	3.2	3.0	2.2	..	2.4	3.0	..		30
4.0	4.0	3.9	3.6	..	6.4	5.7	4.0	3.0	..	..		31
26	26	27	28	26	28	25	21	21	22	21	11	Count
4.2	4.1	4.0	3.8	3.5	3.4	2.8	2.2	2.2	2.6	2.0	2.3	Median
4.2	4.1	4.0	4.0	4.2	4.4	3.2	2.5	2.4	2.4	2.1	2.4	Mean

Sweep 1.0 Mc, to 25.0 Mc, in 27 seconds.



Characteristic : fbEs  
Unit : Mc.  
Month : July 1960

TABLE 5—Contd.  
Ionospheric Data  
75.0°E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							G	3.2	3.6	3.9	4.1	4.2
2							G	3.8	3.6	3.9	4.0	C
3							G	G	3.6	3.0	4.2	4.3
4							G	3.2	3.6	4.0	4.0	4.2
5							G	3.2	3.7	4.0	4.4	4.2
6							G	3.3	3.8	3.9	4.2	4.2
7							3.1	3.3	3.6	3.9	4.1	4.2
8	1.7	1.3					2.7	3.2	3.6	3.9	4.0	4.3
9							2.6	3.2	3.6	3.9	4.1	4.1
10		2.2	2.2				..	3.2	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C
14	2.2	2.3			1.4	1.9	G	3.1	3.6	3.8	4.1	4.0
15							3.0	3.1	3.5	3.9	4.2	4.4
16							..	3.2	3.6	3.8	4.0	4.2
17				1.6			G	3.2	3.4	3.8	4.0	4.0
18	1.6		1.5	1.7			2.6	3.1	3.6	3.8	4.0	4.3
19							2.6	3.2	3.8	..	4.6	4.2
20							G	3.0	3.4	3.8	4.0	4.0
21							2.4	3.1	3.6	4.0	4.0	4.2
22	2.0	1.7	1.6				2.5	3.2	3.5	3.9	4.0	4.2
23	1.8	1.6	1.5	1.7			..	3.2	3.6	3.8	4.1	4.2
24			2.0	1.6			2.7	3.1	3.6	3.8	4.2	4.2
25	2.2	2.6	2.0				..	3.3	3.6	3.8	4.1	4.1
26							2.5	4.2	3.8	3.8	4.1	4.1
27							G	3.1	3.4	3.7	3.9	4.0
28	2.4	1.7		1.6			G	3.0	3.6	3.8	4.0	4.0
29							2.6	3.0	3.5	4.2	4.0	4.2
30							G	G	3.6	3.8	4.0	4.0
31	2.6	3.0	1.9	1.7			G	3.2	3.4	3.7	3.9	4.0
Count	8	8	7	6	1	1	24	28	27	26	27	26
Median	2.1	2.0	1.9	1.6	..	..	G	3.2	3.6	3.8	4.0	4.2
Mean	2.1	2.0	1.8	1.6	..	..	2.7	3.2	3.6	3.9	4.1	4.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc.

Month : July 1960

TABLE 5—Contd.

Ionospheric Data

75.0°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
4.4	4.9	6.8	9.0	7.5	8.4	5.0	3.0	3.0	3.0	2.3	2.2	1
C	C	C	5.3	7.0	5.0	3.0	2.4	3.3	2.7	2.5	..	2
4.3	4.2	4.0	4.2	5.0	6.2	8.0	1.6	2.6	2.6	1.9	..	3
4.2	4.2	4.0	3.7	G	3.8	3.2	..	..	..	1.8	..	4
4.2	4.0	3.9	3.6	3.1	G	2.6	..	..	..	..	..	5
4.2	4.1	4.1	3.6	3.2	2.5	1.8	1.6	2.3	1.8	1.9	..	6
4.1	4.1	3.9	3.5	3.5	3.0	2.5	..	..	..	..	1.6	7
4.1	4.0	G	3.4	3.4	2.5	2.9	1.4	1.9	1.9	1.6	..	8
4.2	4.1	4.2	8.0	3.2	G	2.0	..	..	..	..	..	9
C	C	3.7	3.6	3.2	C	C	C	C	C	C	C	10
C	C	C	C	C	C	C	C	C	C	C	C	11
C	C	C	C	C	C	C	C	C	C	C	C	12
4.2	4.0	3.8	3.6	3.4	6.0	u5.0s	5.2	3.6	2.8	2.9	2.5	13
4.1	4.0	4.0	3.5	3.1	5.0	..	1.9	2.1	2.8	4.0	..	14
4.0	4.0	5.0	5.4	5.4	3.4	u3.0s	u2.4s	u4.0s	2.2	1.9	1.7	16
4.0	4.8	4.1	4.0	3.8	2.8	1.6	1.6	2.6	2.2	2.6	1.6	17
4.4	4.0	4.1	3.6	3.0	..	..	1.4	1.5	2.0	1.8	..	18
4.1	4.0	3.8	4.6	6.5	2.6	2.6	1.8	2.0	1.8	..	3.2	19
4.0	4.0	4.3	B	3.3	2.4	..	3.5	2.4	..	..	..	20
4.2	4.0	3.8	3.6	3.1	2.5	2.6	1.5	2.8	3.8	1.5	1.8	21
C	4.0	4.0	3.6	3.2	2.6	..	..	..	1.6	1.6	1.7	22
4.2	4.2	4.0	4.0	4.0	5.0	3.4	2.8	2.0	2.0	2.0	1.9	23
4.1	4.0	4.0	G	4.1	2.6	1.8	..	..	1.5	..	2.4	24
4.0	4.2	3.9	3.6	6.2	3.9	6.0	2.0	2.7	2.3	..	..	25
4.1	4.0	3.9	3.6	3.4	6.2	4.0	2.4	2.2	2.5	2.9	2.8	26
4.0	4.0	3.8	3.4	3.6	2.5	2.1	1.7	2.6	2.0	3.0	2.5	27
4.1	4.0	3.7	3.4	3.1	2.8	6.4	5.0	2.8	2.5	..	..	28
4.2	4.0	3.9	3.6	3.2	3.2	2.3	2.0	1.4	..	..	..	29
4.1	3.9	3.9	3.5	3.0	2.6	2.2	1.8	2.8	..	..	..	30
4.0	4.0	3.8	3.4	3.2	5.6	5.2	3.6	2.9	..	..	..	31
25	26	27	27	29	27	24	22	21	19	17	12	Count
4.1	4.0	3.9	3.6	3.4	3.0	3.0	2.0	2.6	2.2	2.0	2.0	Median
4.1	4.1	4.0	4.2	4.0	3.9	3.4	2.4	2.5	2.3	2.2	2.2	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds,

Characteristic : fmin

Unit : Mc.

Month : July 1960

TABLE 6

Ionospheric Data

75.0°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	1.2	1.6	1.5	1.6	1.4	1.6	2.3	1.7	2.0	2.6	2.5	2.8
2	2.1	2.1	2.0	1.6	1.7	1.6	2.3	1.8	2.2	2.5	2.5	2.7
3	2.1	1.9	1.8	1.8	1.6	1.4	2.2	1.8	2.1	2.5	3.1	2.2
4	1.8	2.0	1.7	1.5	1.5	1.4	2.2	1.6	1.8	2.3	2.5	2.8
5	1.6	2.2	1.7	1.5	1.7	1.5	2.2	1.8	2.3	3.8	2.9	3.1
6	1.4	1.8	1.9	1.6	1.4	1.7	1.9	2.1	2.1	2.4	2.7	2.7
7	1.6	1.4	1.3	1.2	1.4	1.3	1.5	1.8	2.1	2.3	2.3	2.8
8	1.3	1.2	1.2	1.4	1.3	1.4	1.7	1.7	2.0	2.6	2.6	2.8
9	1.4	1.2	1.2	1.3	1.4	1.4	2.3	1.6	2.1	2.3	2.5	2.7
10	2.4	1.2	1.4	1.8	1.9	1.7	2.3	2.2	2.2	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C
14	1.7	1.7	1.3	2.0	1.3	1.1	2.2	1.7	2.0	2.2	2.4	2.7
15	1.9	1.8	1.5	1.9	2.2	1.8	1.9	1.8	2.3	2.3	2.4	3.2
16	2.2	2.4	2.5	2.7	2.6	2.3	2.4	2.2	2.4	2.5	2.5	2.7
17	1.4	1.3	1.1	1.5	1.4	1.4	1.7	1.5	2.1	2.4	2.4	2.4
18	1.4	1.4	1.5	1.1	1.1	1.4	2.2	1.8	2.2	2.6	2.4	2.6
19	E	1.5	1.9	1.5	1.5	1.5	1.6	1.6	2.0	2.6	4.6	2.7
20	2.0	1.9	1.7	1.6	1.4	1.5	2.0	1.7	2.0	2.0	2.4	2.8
21	2.2	2.2	1.4	1.4	1.9	1.8	2.3	1.8	2.2	2.6	2.8	2.8
22	1.2	1.2	1.7	1.6	2.1	1.6	1.9	1.5	1.7	2.6	2.6	2.4
23	1.4	1.5	1.3	1.5	1.8	1.6	2.1	2.0	2.2	2.4	2.5	2.8
24	2.1	1.5	1.8	1.5	1.6	1.5	1.2	1.7	2.2	2.4	2.5	3.2
25	1.8	1.8	1.7	1.5	2.1	2.0	2.5	2.1	2.3	2.5	2.7	2.6
26	2.1	2.2	1.6	1.5	1.3	1.7	2.0	1.8	2.0	2.7	2.9	2.9
27	2.8	2.6	1.9	2.2	1.7	1.3	1.6	1.7	1.7	2.2	2.2	2.6
28	1.8	1.4	1.2	1.3	1.2	1.4	1.4	1.5	1.7	2.2	C	2.6
29	1.4	1.3	1.2	1.3	1.7	1.3	2.0	1.9	2.0	2.5	2.6	2.9
30	1.5	1.7	1.4	1.6	2.6	2.1	2.6	1.9	2.2	2.4	2.6	2.7
31	2.2	2.2	1.7	1.4	1.4	1.8	2.0	1.7	2.2	2.4	2.5	2.6
Count	28	28	28	28	28	28	28	28	28	27	26	27
Median	1.8	1.7	1.6	1.5	1.6	1.5	2.0	1.8	2.1	2.4	2.5	2.7
Mean	1.8	1.7	1.5	1.6	1.6	1.6	2.0	1.8	2.1	2.5	2.6	2.7

Sweep 1°0 Mc. to 25°0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc.

Month : July 1960

TABLE 6

Ionospheric Data  
75.0°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
3.0	3.0	2.8	2.6	2.1	2.1	1.8	1.1	1.2	1.4	1.7	1.4	1
C	C	C	2.3	2.0	1.7	1.4	1.2	1.2	1.1	1.4	2.2	2
3.0	3.0	2.7	2.5	2.2	2.2	1.8	1.4	1.3	1.4	1.4	1.6	3
2.9	3.0	2.8	2.7	2.6	2.4	1.8	1.4	1.7	1.3	1.4	1.8	4
3.0	3.0	2.8	2.5	2.2	2.0	1.8	1.3	1.5	1.4	2.3	2.1	5
2.8	2.8	2.6	2.5	1.9	2.1	1.4	1.1	1.1	1.1	1.2	1.4	6
2.7	2.6	2.5	2.2	1.9	1.5	1.2	1.0	1.2	1.5	1.3	1.2	7
3.0	2.7	2.7	2.4	2.3	1.8	1.4	1.0	1.2	1.1	1.2	1.4	8
2.8	3.1	2.8	2.8	2.1	2.2	2.1	1.3	1.6	1.4	1.4	1.9	9
C	C	2.5	2.7	2.6	2.0	C	C	C	C	C	C	10
C	C	C	C	C	C	C	C	C	C	C	C	11
C	C	C	C	C	C	C	C	C	C	C	C	12
2.8	2.6	2.3	2.4	4.2	2.6	1.9	1.5	1.3	1.4	1.0	2.0	13
2.6	3.0	2.7	2.7	2.2	1.6	1.5	E	2.0	1.7	1.5	2.1	14
2.7	2.8	2.6	2.0	2.1	1.8	1.4	2.2s	1.0	E	1.1	1.3	15
2.6	2.7	2.6	2.5	1.9	1.6	1.2	1.1	E	1.0	E	1.2	16
2.4	2.4	2.7	2.6	2.4	2.1	2.0	1.5	1.4	1.2	E	1.5	17
2.5	2.4	2.2	2.2	2.0	1.7	1.5	1.1	E	1.3	1.6	2.0	18
2.8	2.7	2.4	2.4	3.0	2.2	2.0	1.3	1.4	1.3	1.5	2.0	19
2.8	2.8	2.4	2.6	2.1	1.5	1.4	E	1.2	1.0	1.1	1.0	20
2.6	2.9	2.6	2.5	2.4	2.2	2.1	1.6	1.2	1.4	1.4	1.3	21
3.0	3.0	2.8	2.6	2.0	1.8	1.4	1.0	1.0	1.0	1.7	1.7	22
3.2	3.0	2.6	3.1	2.4	2.1	1.5	1.3	1.6	1.5	1.4	1.7	23
2.7	2.5	2.4	2.3	1.8	1.7	1.5	1.2	1.2	1.3	2.1	1.9	24
2.9	2.8	2.8	2.5	2.0	1.9	2.0	1.2	1.3	1.5	1.9	1.8	25
2.8	2.8	2.5	2.4	2.0	1.8	1.1	1.0	1.1	1.2	1.4	2.2	26
2.8	2.6	2.2	2.3	1.9	1.9	1.3	1.3	1.4	1.4	1.4	1.6	27
3.2	3.0	2.8	2.6	2.2	1.9	1.4	1.4	1.0	1.5	1.4	1.9	28
3.0	2.7	2.5	2.2	1.9	1.7	1.7	1.8	1.5	1.5	2.4	1.1	29
2.7	2.4	2.6	2.5	2.2	1.7	1.6	1.5	1.5	1.2	2.4	2.6	30
2.6	2.6	2.7	2.8	2.8	2.9	2.8	2.8	2.8	2.8	2.8	2.8	Count
2.8	2.8	2.6	2.5	2.1	1.9	1.5	1.2	1.2	1.4	1.4	1.7	Median
2.8	2.8	2.6	2.5	2.2	1.9	1.6	1.3	1.3	1.3	1.6	1.7	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

TABLE 6—Contd.

Latitude : 10° 2' N

Unit Mc.

Ionospheric Data

Longitude : 77° 5' E

Month : July 1960

75°E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	1.5	1.7	2.0	1.5	1.8	1.8	1.6	2.0	2.2	2.5	3.0	3.2
2	2.0	2.0	1.5	1.7	1.7	1.9	1.9	2.0	2.4	2.5	2.6	C
3	2.2	1.9	2.0	1.6	1.5	1.8	2.2	2.0	2.2	2.5	1.9	3.0
4	2.0	2.1	1.8	1.7	1.4	1.6	1.7	1.9	2.0	2.3	3.0	3.0
5	2.2	1.8	1.7	1.6	1.5	2.0	2.0	1.9	2.3	2.4	2.9	3.0
6	1.5	1.7	2.1	1.6	1.5	1.6	2.1	1.9	2.3	2.5	2.6	3.0
7	1.5	1.3	1.3	1.9	1.3	1.7	1.6	2.2	2.1	2.1	2.5	2.7
8	1.4	1.2	1.2	1.4	1.4	1.6	1.6	1.8	2.3	2.6	2.7	2.8
9	1.3	1.2	1.2	1.6	1.3	1.5	1.6	1.9	2.2	2.3	2.6	2.6
10	2.0	1.2	1.4	1.9	1.8	1.9	2.8	2.3	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C
14	1.4	1.0	1.8	1.5	1.1	1.5	1.7	1.9	2.2	2.3	2.8	2.7
15	1.3	1.8	1.8	2.1	E	2.2	1.9	2.1	2.4	2.3	2.8	2.8
16	2.3	2.7	2.6	2.6	2.5	2.3	2.6	2.3	2.5	2.5	2.6	2.7
17	1.5	1.4	1.6	1.2	1.5	1.6	1.7	1.7	2.3	2.2	2.4	2.4
18	1.2	1.4	1.4	E	1.5	1.6	2.0	2.2	2.4	2.5	2.6	2.6
19	1.2	1.7	2.0	1.8	1.5	1.7	1.5	1.8	2.2	4.2	3.2	2.6
20	2.0	1.9	1.3	1.5	1.2	1.5	1.7	1.9	2.1	2.2	3.0	2.7
21	2.2	1.8	1.8	1.7	1.8	1.7	1.9	2.1	2.4	2.4	3.0	2.8
22	1.1	1.5	1.4	1.9	1.8	1.5	1.7	1.7	2.6	2.3	2.6	2.7
23	1.7	1.3	1.3	1.2	1.8	1.7	2.7	2.2	2.5	2.4	2.7	3.0
24	1.8	1.5	1.6	1.3	1.8	1.3	1.3	1.7	2.2	2.1	2.6	3.0
25	2.1	1.9	1.9	1.6	1.9	1.8	2.5	2.2	2.4	2.4	2.7	2.8
26	2.3	2.0	1.4	1.4	1.5	1.7	1.8	1.7	3.0	2.7	2.8	2.8
27	2.6	2.2	1.7	2.0	1.5	1.6	1.7	1.8	2.0	2.3	2.4	3.0
27	1.7	1.4	1.3	1.1	1.5	1.4	1.4	1.5	2.0	2.2	2.4	2.4
29	1.5	1.2	1.2	1.5	1.4	1.6	2.2	1.9	2.1	2.6	2.9	3.2
30	1.9	1.7	1.5	1.9	1.7	1.9	2.2	1.9	2.2	2.3	2.5	2.8
31	2.1	2.0	1.6	1.3	1.9	1.7	2.0	2.0	2.3	2.4	2.7	2.8
Count	28	28	28	28	28	28	28	28	27	27	27	26
Median	1.8	1.7	1.6	1.6	1.5	1.7	1.8	1.9	2.3	2.4	2.7	2.8
Mean	1.8	1.7	1.6	1.6	1.6	1.7	1.9	1.9	2.3	2.4	2.7	2.8

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc.

Month : July 1960

TABLE 6—Contd.

Ionospheric Data

75°E Mean Time

Latitude : 10°2'N.

Longitude : 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
3.1	3.1	2.8	2.4	1.9	2.0	1.4	1.1	1.2	1.5	1.3	1.4	1
C	C	C	2.1	1.9	1.6	1.1	1.2	1.4	1.2	2.2	2.1	2
3.0	3.0	2.6	2.2	1.9	2.1	1.4	1.2	1.6	1.4	1.4	1.9	3
2.8	2.0	2.8	2.8	2.8	2.2	1.4	1.4	1.6	1.5	1.5	2.4	4
3.0	2.8	2.8	2.4	1.7	1.9	1.3	1.4	1.5	1.5	2.0	C	5
2.7	2.6	3.1	2.4	1.9	1.5	1.2	1.3	1.1	1.1	1.3	1.8	6
2.6	2.7	2.5	1.9	1.8	1.4	1.0	1.5	1.3	1.4	1.6	1.2	7
2.9	3.1	2.9	2.4	2.2	1.6	1.0	1.3	1.1	1.2	1.3	1.6	8
2.9	3.0	3.0	2.4	3.2	1.9	1.3	1.4	1.5	1.5	1.8	2.0	9
C	C	2.3	2.4	2.3	C	C	C	C	C	C	C	10
C	C	C	C	C	C	C	C	C	C	C	C	11
C	C	C	C	C	C	C	C	C	C	C	C	12
C	C	C	C	2.0	1.4	1.1	S	1.4	S	1.3	1.5	13
2.8	2.6	2.6	2.2	2.2	2.2	1.9	1.4	1.4	2.1	1.6	1.5	14
2.7	3.0	2.7	2.2	1.8	1.7	1.0	1.5	1.6	1.8	2.1	2.4	15
2.5	2.6	2.4	2.1	1.8	1.6	U1.2s	E	1.0	1.1	1.0	1.0	16
2.8	3.0	2.5	2.2	2.0	1.4	E	1.1	E	1.2	1.5	1.4	17
2.3	3.0	2.8	2.4	2.3	2.6	1.5	1.1	1.3	1.1	1.3	1.7	18
3.4	2.4	2.2	2.0	1.8	1.4	1.1	1.1	E	E	1.6	1.8	19
2.8	2.8	2.4	4.7	2.4	2.1	1.5	1.5	1.1	1.5	2.0	2.2	20
3.0	2.6	2.6	2.4	2.0	1.5	E	1.0	1.2	1.2	1.1	1.0	21
C	3.0	2.7	2.5	2.3	2.0	1.5	1.4	1.3	1.2	1.0	1.6	22
3.0	3.1	2.6	2.3	1.8	1.9	1.1	1.1	1.2	1.2	1.5	1.5	23
2.9	2.7	2.8	2.8	2.4	2.0	1.2	1.5	1.2	1.2	1.7	1.8	24
2.8	2.4	2.3	2.0	1.6	1.4	1.2	1.5	1.5	1.7	2.0	2.4	25
2.8	3.0	2.8	2.2	2.0	1.8	1.1	1.2	1.5	1.7	1.6	1.8	26
2.7	3.0	2.4	2.2	2.0	1.4	1.0	1.0	1.1	1.1	1.9	2.4	27
2.6	2.5	2.3	2.1	2.2	1.3	1.1	1.1	1.2	1.1	1.5	1.3	28
3.0	3.0	2.8	2.3	2.1	1.4	1.3	1.0	1.4	1.4	1.7	1.6	29
2.8	2.7	2.4	2.3	2.2	1.8	1.6	1.4	1.5	1.5	2.4	1.2	30
2.7	2.7	2.7	2.2	2.4	1.4	1.5	1.5	1.4	E	1.1	2.1	31
25	26	27	28	29	28	28	27	28	27	28	27	Count
2.8	2.9	2.6	2.3	2.0	1.6	1.2	1.3	1.3	1.2	1.6	1.7	Median
2.8	2.8	2.6	2.4	2.1	1.7	1.3	1.3	1.3	1.4	1.6	1.7	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F<sub>2</sub>

Unit : Km

Month : July 1960

TABLE 7

Ionospheric Data

75°E Mean Time

Latitude : 10°28'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	340	L
2								L	L	L	L	C
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	L	L
6								L	L	L	L	LH
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	C	C	u310L C
11							C	C	C	C	C	C
12							C	C	C	C	C	C
13							C	C	C	C	C	C
14							L	L	L	L	L	L
15							..	..	L	LH	LH	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22							L	L	L	L	L	L
23							L	L	L	L	L	LH
24							L	L	L	L	L	L
25							L	L	L	L	L	L
26								L	L	L	L	LH
27								L	L	L	L	335
28								L	L	L	C	L
29								L	L	L	L	L
30								L	L	L	L	L
31								L	L	L	L	L
Count								..	..	..	1	2
Median								..	..	..	..	..
Mean								..	..	..	..	..

See wp 11.0 Mc. in to 25.0 Mc in 27 seconds.

Characteristic : h'F<sub>2</sub>

Unit : Km

Month : July 1960

TABLE 7  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	450	440	A	A	..							1
C	C	C	L	L	A							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
												5
L	L	L	L	L	L							6
L	L <sub>H</sub>	L	L	L	L							7
L	L	L	L	L	L							8
LH	L	L	A	A	L							9
C	C	L	L	L	L	C						10
C	C	C	C	C	C	C						11
C	C	C	C	C	C	C						12
LH	L	L	L	L	L	A						13
L	L	L	L	L	L	L						14
												15
L	LH	L	L	L	L	L						16
L	L	L	L	L	L	L						17
L	L	L	L	L	L	L						18
L	L	L	L	L	L	..						19
												20
L	L	L	L	L	L	L						21
LH	L	L	L	L	..	..						22
L	L	L	L	L	L	L						23
L	L	L	L	L	L	L						24
LH	LH	L	L	L	A							25
												26
LH	LH	LH	L	L	..							27
L	L	L	L	L	L	L						28
L	410	L	L	350	L	L						29
L	L	L	L	L	L	L						30
L	L	L	L	L	A	L						31
..	2	1	..	1	..	..						Count
..	..	..	..	..	..	..						Median
..	..	..	..	..	..	..						Mean

Scanned 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic: h'F<sub>2</sub>

Unit: Km

Month: July 1960

TABLE 7—(contd.)

Ionospheric Data

75°E Mean Time

Latitude: 10°2'N

Longitude: 77°5' E

Date	0030	0130	02	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	L
2								L	L	L	L	C
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	L	L
6								L	L	LM	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	LM	L	L
10								L	C	C	C	C
11							C	C	C	C	C	C
12							C	C	C	C	C	C
13							C	C	C	C	C	C
14								L	L	L	L	u360r
15								L	L	L	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	300	L	L	L
20								L		L	L	L
21								L	L	L	L	u340r
22							L	L	L	L	LM	LM
23							L	L	L	L	L	L
24							L	L	L	L	L	LM
25							L	L	L	L	L	L
26							L	L	L	L	LM	LM
27							L	L	L	L	345	L
28							L	L	L	L	L	L
29							L	280	L	L	L	L
30							L	L	L	L	L	L
31							L	L	L	L	L	L
Count							..	1	1	..	1	2
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 Seconds.

Characteristic : h'F<sub>2</sub>

Unit : Km

Month : July 1960

TABLE 7—(contd.)

Ionospheric Data

75°E Mean Time

Latitude : 10°2'N

L

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	380	A	A	A								1
C	C	C	L	A								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L	C							5
L	L	L	L	L								6
L	L <sub>h</sub>	L	L	L	C							7
L	L	L	L	L	C							8
C	C	L	A	L		C						9
C	C	L	L	L		C						10
C	C	C	C	C		C						11
C	C	C	C	C		C						12
L	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	L	A	L								16
L	L	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
C	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L <sub>h</sub>	L	L	L								26
L	L	L	L	L	L							27
L	445	L	L	L	..							28
L	L	L	L	L	..							29
L	L	L	L	L	L							30
L	L	L	L	L	L							31
1	2	..	..	1	..	..						Count
..	..	..	..	..	..	..						Median
..	..	..	..	..	..	..						Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 Seconds.

Characteristic : h'F

Unit : Km

Month : July 1960

TABLE 8

Ionospheric Data

75°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	500	570	560	500	360	280	260	250	230	215	210	200
2	300	F	300	400	380	300	260	240	A	205H	205	200
3	295	280	275	280	270	240	260	240	235	A	A	200
4	260	280	300	300	300	255	265	240	220	220	200	200H
5	270	280	280	270	260	240	265	245	220	200	200H	200H
6	290	280	280	310	320	265	275	250	235	220	215	200
7	320	330	330	305	260	230	270	250	235	220	210	205
8	F	F	U320F	290	230	240	260	240	225	220	205	A
9	U335F	380	F	315	260	220	270	240	220	220	205	210
10	320	325	340	365	300	250	270	250	230	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C
14	270	280	280	300	335	340	260	240	210	200	205	200
15	300	400	480	F	F	U460F	270	240H	220	220H	200	210
16	250	260	255	240	260	240	270	245	240	220	200H	200H
17	275	260	280	300	250	240	260	250	230	220	200	200
18	305	340	370	320	240	225	260	235	230	220	210	215
19	300	270	280	260	280	260	260	240	220	220	B	A
20	300	300	320	340	320	240	265	240	220	220	200	200
21	265	270	350	385	300	280	280	240	230	210	200	200
22	365	U325F	U320F	U310F	U280F	235	265	235	220	205H	205H	200H
23	U305F	U300F	U320F	U315F	U280F	220F	265	245	220	215	220	205H
24	U300F	U280F	U290F	280	255	235	260	235	215	200	180H	205H
25	315	335	365	360	U280F	235	255	230	215	200	200H	200
26	295	285	260	250	230	245	255	A	220	200	200	200H
27	295	280	285	255	220	240	255	235	225	205	205	200
28	300	285	315	320	250	210	260	230	215	200	C	205
29	225	220	240	240	250	235	260	230	220	210	200	195H
30	330	390	440	425	U400F	300	260	230	220	210	205	210
31	250	250	270	275	240	220	250	225	220	190H	185H	185H
Count	27	26	27	27	27	28	28	27	27	26	24	25
Median	300	280	300	305	270	240	260	240	220	210	200	200
Mean	300	310	325	315	280	255	265	240	225	210	205	200

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

TABLE 8

Unit : Km

Ionospheric Data

Latitude : 10°2'N

Month : July 1960

75°E Mean Time

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
200 <sub>H</sub>	200 <sub>H</sub>	A	A	A	A	A	320	340	F	F	340	1
C	C	C	A	A	A	280	325	320	320	340	320	2
200	200	220 <sub>H</sub>	240	A	A	A	320	320	320	305	275	3
200	215	210	220 <sub>H</sub>	235	A	275	310	F	F	300	300	4
195	200	200 <sub>H</sub>	215	220	245	280	330	F	F	320	290	5
205	200	210	220	235	260	290	u330 <sub>F</sub>	F390 <sub>F</sub>	u390 <sub>U</sub>	360	345	6
205	195	190	200	240	255	u300 <sub>A</sub>	360	u390 <sub>F</sub>	F	F	F	7
195	180 <sub>H</sub>	220	220	225	245	u285 <sub>A</sub>	305	340	345	330	330	8
200	195	200 <sub>H</sub>	u240 <sub>A</sub>	A	250	280	300	F	u370 <sub>F</sub>	370	340	9
C	C	220	215	240	260	C	C	C	C	C	C	10
C	C	C	C	C	C	C	C	C	C	C	C	11
C	C	C	C	C	C	C	C	C	C	C	C	12
200	200	185	A	B	A	260	305	315	350	320	300	13
200	200	210	210	230	A	u320 <sub>A</sub>	280	F	340	300	270	14
									330	300	240	15
200 <sub>H</sub>	215	200	A	A	A	265 <sub>H</sub>	340	F	F	u430 <sub>F</sub>	310	16
200	220	A	A	230	260	280	340	400 <sub>F</sub>	420	350	340	17
200 <sub>H</sub>	200 <sub>H</sub>	225	220	230	240	265	280 <sub>F</sub>	300 <sub>F</sub>	320	320	320	18
200	190	200	220	A	A	280	315	320	340	340	300	19
200	195	200	220	240	240	260	275	300	305	310	300	20
200	200	190 <sub>H</sub>	200 <sub>H</sub>	235	240	260	340	350	350	340	340	21
200	195 <sub>H</sub>	190 <sub>H</sub>	200 <sub>H</sub>	230	260	275	u330 <sub>F</sub>	F	u340 <sub>F</sub>	u340 <sub>F</sub>	F	22
210	200	200 <sub>H</sub>	A	A	A	A	340	F	F	u400 <sub>F</sub>	u350 <sub>F</sub>	23
195 <sub>H</sub>	195	215	A	A	240	280	u320 <sub>F</sub>	F	F	F	u315 <sub>F</sub>	24
190 <sub>H</sub>	200 <sub>H</sub>	215	200 <sub>H</sub>	A	A	270	300	u320 <sub>F</sub>	345	360	330 <sub>F</sub>	25
200 <sub>H</sub>	200 <sub>H</sub>	200 <sub>H</sub>	225	A	A	275	320 <sub>F</sub>	u340 <sub>F</sub>	320	310	310	26
180 <sub>H</sub>	200	190 <sub>H</sub>	180 <sub>H</sub>	220	A	280	340	F	F	320	300	27
200	200	190 <sub>H</sub>	205	200	240	A	305	290	280	270	260	28
180 <sub>H</sub>	195 <sub>H</sub>	200	225	225	250	285	315	340	350	300 <sub>F</sub>	290	29
205	200 <sub>H</sub>	195 <sub>H</sub>	185 <sub>H</sub>	210 <sub>H</sub>	240	270	300	300	310	320	295	30
195	200	205	205	215	A	A	330	330	320	295	300	31
26	26	25	21	17	15	22	27	18	20	25	26	Count
200	200	200	215	230	245	280	320	325	340	320	305	Median
200	200	205	215	225	250	280	320	335	340	330	310	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 Seconds.

Characteristic : h'F

Unit : Km

Month : July 1960

TABLE 8—Contd

Ionospheric Data

75°E Mean Time

Latitude 10·2° N

Longitude : 77·5° E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	550	560	560	460	300	280	260	230	220	205	220 <sub>H</sub>	195 <sub>H</sub>
2	280	280	360	400	340	295	250	A	205 <sub>H</sub>	200	205	C
3	280	275	275	275	240	260	245	240	220	A	210	200
4	260	300	315	300	275	260	245	240	220	200	200	215 <sub>H</sub>
5	290	280	270	260	240	275	255	230	220	200	195 <sub>H</sub>	200 <sub>H</sub>
6	280	285	300	325	300	280	260	240	230	220	210	205
7	320	340	310	285	235	260	260	240	220	215	210	200
8	F	u345 <sub>F</sub>	u300 <sub>F</sub>	245	235	265	250	230	220	210	200 <sub>H</sub>	200
9	360	u380 <sub>F</sub>	u355 <sub>F</sub>	285	230	255	260	240	210	210	205	205
10	300	320	360	320	270	280	260	240	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C
14	270	280	280	320	340	280	250	225	215 <sub>H</sub>	205	200	200
15	340	435	u520 <sub>F</sub>	F	E	300	255	230	215	200 <sub>H</sub>	205 <sub>H</sub>	200
16	260	260	250	225	265	265	260	250	230	210 <sub>H</sub>	195 <sub>H</sub>	200
17	260	260	300	280	230	270	260	240	220	200	200 <sub>H</sub>	200
18	315	360	340	285	220	265	250	230 <sub>H</sub>	220	200 <sub>H</sub>	200	220
19	280	280	275	280	280	280	240	220	230	u220 <sub>B</sub>	240	200 <sub>H</sub>
20	300	310	340	340	280	280	250	230	220	205	200	200
21	260	300	400	380	260	280	250	240	220	215	200	200
22	340	u325 <sub>F</sub>	u315 <sub>F</sub>	u290 <sub>F</sub>	u240 <sub>F</sub>	240	250	230	210 <sub>H</sub>	200 <sub>H</sub>	205	200
23	u300 <sub>F</sub>	u305 <sub>F</sub>	u315 <sub>F</sub>	u300 <sub>F</sub>	u245 <sub>F</sub>	245	245	230	220	210	220	200
24	u300 <sub>F</sub>	u280 <sub>F</sub>	290 <sub>F</sub>	260	240	255	250	230	215	195 <sub>H</sub>	210	200 <sub>H</sub>
25	315	365 <sub>F</sub>	365	320	u250 <sub>F</sub>	255	240	230	200	200 <sub>H</sub>	195 <sub>H</sub>	190
26	300	270	255	250	240	270	240	A	220	205	200	195 <sub>H</sub>
27	275	290	270	240	235	265	245	230	215	200	195 <sub>H</sub>	190 <sub>H</sub>
28	300	300	325	295	225	230	245	225	210	190 <sub>H</sub>	200	200
29	210	230	240	245	240	280	245	220	210	210	200	200 <sub>H</sub>
30	360	430	445	420	340	260	240	225	210	215	210	210
31	240	260	280	260	230	245	u225 <sub>a</sub>	220	200 <sub>H</sub>	195 <sub>H</sub>	185 <sub>H</sub>	185 <sub>H</sub>
Count	27	28	28	27	28	28	28	26	27	26	27	26
Median	300	300	310	285	240	265	250	230	220	205	200	200
Mean	300	320	330	300	260	265	250	230	215	205	205	200

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : h'F

TABLE 8—(contd.)

Latitude : 10° 2' N

Unit : Km

Ionospheric Data

Longitude : 77° 5' E

Month : July 1960

75°E Mean Time

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
200	260	A	A	A	A	A	370	350	F	F	300	1
C	C	C	A	A	300	300	340	320	320	335	300	2
200	200 <sub>H</sub>	235	A	A	A	A	320	320	315	300	260	3
200	200	210	220	240	A	300	335	F	320	300	300	4
200	200	205	220	230	260	300	F	F	315	300	C	5
200	220	220	225	250	270	305	F	360	u360 <sub>F</sub>	340	330	6
200	195	195	235	240	u270 <sub>A</sub>	u310 <sub>A</sub>	395	F	F	F	F	7
185 <sub>H</sub>	210	220	220	230	260	u295 <sub>A</sub>	320	340	330	325	330	8
195	220	220	A	240	270	280	F	F	360	350	320	9
C	C	220	195 <sub>H</sub>	245	C	C	C	C	C	C	C	10
C	C	C	C	C	C	C	C	C	C	C	C	11
C	C	C	C	C	C	C	C	C	C	C	C	12
200	200	185	C	u255 <sub>A</sub>	A	A	350	320	320	315	280	13
190	200	205	220	235	A	275	300	320	320	u280 <sub>A</sub>	295	14
			220	u240 <sub>A</sub>	A	340	u280 <sub>F</sub>	330	300	270	240	15
200 <sub>H</sub>	210	A	A	A	270	u310 <sub>s</sub>	FS	F	u400 <sub>F</sub>	330	280	16
200	A	u230 <sub>A</sub>	240	270	280 <sub>H</sub>	300	u360 <sub>F</sub>	u460 <sub>F</sub>	400	340	310	17
200 <sub>H</sub>	200 <sub>H</sub>	220	220	240	250	265	320 <sub>F</sub>	300 <sub>F</sub>	320	320	310	18
190	200	190 <sub>H</sub>	A	A	260	300	320	320	340	320	320	19
200	200	u230 <sub>A</sub>	B	240	260	260	300	300	320	300	280	20
200	190 <sub>H</sub>	195 <sub>H</sub>	230	225	260	300	u340 <sub>F</sub>	340	360	340	350	21
C	200 <sub>H</sub>	215	220	240	265	300	u360 <sub>F</sub>	F	F	u340 <sub>F</sub>	u310 <sub>F</sub>	22
210 <sub>H</sub>	200	210	u220 <sub>A</sub>	A	A	310	380 <sub>F</sub>	F	F	u370 <sub>F</sub>	330	23
195 <sub>H</sub>	200 <sub>H</sub>	210	220	A	260	285	F	F	F	F	u310 <sub>F</sub>	24
180 <sub>H</sub>	210	205	215	A	A	A	315 <sub>F</sub>	F	355	345	305	25
200 <sub>H</sub>	200 <sub>H</sub>	210 <sub>H</sub>	215 <sub>H</sub>	235	A	A	340	u290 <sub>F</sub>	u310 <sub>F</sub>	310	305	26
180 <sub>H</sub>	195 <sub>H</sub>	185 <sub>H</sub>	180 <sub>H</sub>	240	260	310	315	F	320	310	300	27
200	200 <sub>H</sub>	200	200	230	260 <sub>A</sub>	A	A	290	280	270	245	28
200	215	205	220	225	270	290	335	335	u325 <sub>F</sub>	285 <sub>F</sub>	300	29
200	200	200 <sub>H</sub>	180 <sub>H</sub>	240	260	285	305	305	315	305	275	30
185 <sub>H</sub>	200	210	215	230	A	u320 <sub>A</sub>	330	320	315	300	265	31
25	25	25	21	21	18	22	21	18	23	25	26	Count
200	200	210	220	240	260	300	330	320	320	315	300	Median
195	205	210	215	240	265	295	330	330	330	315	300	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km

Month : July 1960

TABLE 9

Ionospheric Data

75°E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								A	A	A	A	A
2								A	A	A	A	A
3								105	105	A	A	A
4							120H	100	A	A	A	A
5							..	105	105	B	A	A
6							130	120	A	A	A	A
7								A	A	A	A	A
8								115	A	A	A	A
9								110	A	A	A	A
10								A	A	C	C	C
11							C	C	C	C	C	C
12							C	C	C	C	C	C
13							C	C	C	C	C	C
14								110	A	A	A	A
15								120	110	A	A	B
16								110	110	A	A	A
17							130	120	A	110	110	A
18							..	A	110	110	A	A
19							120	115	A	A	B	A
20							..	120	110	A	A	A
21							..	120	110	110	A	120
22							140	A	A	A	A	A
23							..	A	A	A	A	A
24							140	115	115	A	A	A
25							..	A	A	A	A	A
26							..	A	A	A	A	A
27							130	105	105	A	A	A
28							120	110	110	105	A	C
29							..	A	A	A	A	A
30							..	115	105	A	A	A
31							..	105	110	A	A	A
Count							8	18	12	4	1	1
Median							130	110	110	..	..	..
Mean							130	110	110	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km

Month : July 1960

TABLE 9

Ionospheric Data

75°E Mean Time

Latitude 10°2' N

Longitude 77°5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A	A							1
C	C	C	A	A	A							2
A	A	A	A	A	A							3
A	A	A	105	105	A							4
A	105	A	A	A	105							5
A	A	A	A	110	110							6
A	A	A	A	A	A							7
A	A	A	110	A	A							8
A	A	A	A	A	120							9
C	C	A	A	A	A							10
C	C	C	C	C	C							11
C	C	C	C	C	C							12
A	A	A	A	B	A							13
A	A	A	120	110	A							14
												15
A	A	A	A	A	A							16
A	A	115	A	A	A							17
A	A	A	A	120	120							18
A	A	A	A	110	A							19
A	A	110	120	120	120							20
110	A	A	120	110	A							21
A	A	A	A	120	A							22
A	A	A	A	A	A							23
A	A	A	120	120	120							24
A	A	A	A	A	A							25
A	A	A	A	A	A							26
A	A	A	110	115	A							27
A	A	A	A	110	A							28
A	A	A	A	110	A							29
A	A	A	A	A	A							30
A	A	A	A	110	A							31
1	1	2	7	13	6							Count
..	..	..	120	110	120							Median
..	..	..	115	115	115							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : h'E  
Unit : Km  
Month : July 1960.

TABLE 9—(contd.)  
Ionospheric Data  
75°E Mean Time

Latitude 10°2' N  
Longitude 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							105	A	A	A	A	A
2							105	A	A	A	A	A
3							120	105	105	A	A	A
4							105H	A	A	A	A	A
5							120	A	A	A	A	A
6							125	A	A	A	A	A
7							A	A	A	A	A	A
8							120	A	A	A	A	A
9							120	A	A	A	A	A
10							..	A	C	C	C	C
11							C	C	C	C	C	C
12							C	C	C	C	C	C
13							C	C	C	C	C	C
14							115	110	A	A	A	A
15							..	110	110	A	A	A
16							..	110	105	A	A	A
17							120	110	110	110	110	A
18							A	120	110	A	A	A
19							120	110	115	B	A	A
20							120	110	110	A	A	A
21							A	115	110	A	A	120
22							A	A	A	A	A	A
23							..	A	A	A	A	A
24							105	120	A	A	A	A
25							A	A	A	A	A	A
26							A	A	A	A	A	A
27							115	110	A	A	A	A
28							120	110	105	A	A	A
29							130	A	A	A	A	A
30							120	110	A	A	A	A
31							120	105	A	A	A	A
Count							18	14	9	1	1	1
Median							120	110	110	..	..	..
Mean							115	110	110	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km

Month : July 1960

TABLE 9—(contd.)

Ionospheric Data

75°E Mean Time

Latitude 10.2° N

Longitude 77.5° E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	A	A	A	A							1
C	C	C	A	A	A							2
A	A	A	A	A	A							3
A	A	A	A	115	A							4
A	A	A	A	A	120							5
A	A	A	A	A	..							6
A	A	A	A	A	A							7
A	A	110	105	A	..							8
A	A	A	A	A	130 <sub>H</sub>							9
C	C	A	A	A	C							10
C	C	C	C	C	C							11
C	C	C	C	C	C							12
A	A	120	A	A	A							13
A	A	A	120	A	A							14
A	A	A	A	A	..							15
A	A	A	A	A	..							16
A	A	115	A	A	..							17
A	B	A	120	120	..							18
A	A	A	115	110	..							19
A	A	110	B	120	120							20
A	A	110	120	110	A							21
C	A	A	A	A	..							22
A	A	A	A	A	A							23
A	A	120	120	120	A							24
A	A	A	A	A	A							25
A	A	A	A	A	A							26
A	A	110	115	A	A							27
A	A	A	A	A	..							28
A	A	A	A	A	A							29
A	A	A	A	110	A							30
A	A	A	A	A	A							31
..	..	7	7	7	3							Count
..	..	110	120	115	..							Median
..	..	115	115	115	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : July 1960

TABLE 10

Ionospheric Data

75°E Mean Time

Latitude 10°2' N

Longitude 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1				110				100	100	100	100	100
2				..				100	100	100	100	100
3				105			G	G	100	100	100	100
4				..			..	100	100	100	100	100
5				..				G	G	G	100	100
6				120			G	G	100	100	100	100
7		120		120			120	100	100	100	100	100
8	120	120		..			135	100	100	100	100	100
9	120	..		120			..	100	100	100	100	100
10	..	100	100	120			..	100	100	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C
14	100	120	100	..		100	..	100	100	100	100	100
15				..			120	100	100	100	100	100
16				..			..	G	100	100	100	100
17			110	120	120		G	120	115	100	100	100
18		100		100	100		..	120	100	100	100	100
19	100	100		100			G	105	100	100	100	100
20	..	120		..			..	140	100	100	100	100
21	..	..		120			..	110	100	100	100	100
22	100	100	105	120	115		G	100	100	100	100	100
23	120	120	125	120			..	110	105	100	100	100
24	..	..	135	110			G	G	G	100	100	100
25	120	120	120	120			..	110	100	100	100	100
26	..	..	..	..			..	100	100	100	100	100
27	..	..	..	..			G	100	100	100	100	100
28	110	120	120	155			G	145	100	100	C	100
29	120	..	..	..			..	105	100	100	100	100
30	125	..	..	..			..	100	100	100	100	100
31	-	115	110	110			..	115	115	100	100	100
Count	10	12	9	13	3	1	3	23	26	26	26	27
Median	120	120	110	120	..	..	..	100	100	100	100	100
Mean	115	115	115	120	..	..	..	110	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : July 1960

TABLE 10  
Ionospheric Data  
75°E Mean Time

Latitude 10.2 N

Longitude 77.5° E

12	13	14	15	16	17	18	19	20	21	22	23	Date
100	100	100	100	100	100	100	100	100	100	105	100	1
C	C	C	100	100	100	100	100	100	100	110		2
100	100	100	100	100	120	115	140	100	100	100		3
100	100	100	100	100	100	100	100	100	115	130		4
100	100	100	100	100	G	140	100	100	100	100		5
100	100	100	100	105	G	100	120	105	100	120	100	6
100	100	100	100	100	100	100	100	135	100	130	120	7
100	100	100	120	100	100	100	100	110	100	100	100	8
100	100	100	100	100	G	120	100	100	120	120	100	9
C	C	100	100	100	100	C	C	C	C	C	C	10
C	C	C	C	C	C	C	C	C	C	C	C	11
C	C	C	C	C	C	C	C	C	C	C	C	12
100	100	100	100	100	100	100	100	100	100	100	100	13
100	100	100	100	100	100	100	100	100	100	100	100	14
								100	100	120	120	15
100	100	100	100	100	100	100	100	105	100	100	110	16
100	100	100	110	110	110	120	110	105	100	100	120	17
100	100	100	100	105	110	100	100	140	125	100	100	18
100	100	100	100	100	100	100	100	100	100	120	100	19
100	100	100	G	G	140	100	130	130	140	120	100	20
100	100	100	100	100	100	100	100	100	100	100	100	21
100	100	100	100	110	115	100	100	100	100	130	115	22
100	100	100	105	100	100	100	100	100	100	100	100	23
100	100	100	130	135	G	100	100	100	115	115	100	24
100	100	100	100	100	100	100	100	100	100	100	120	25
100	100	100	100	100	100	100	100	100	100	100	100	26
100	100	100	100	105	110	105	105	150	120	115	120	27
100	100	100	100	100	115	100	100	100	100	100	100	28
100	100	100	100	100	100	100	135	100	115	100	100	29
100	100	100	100	100	100	105	100	100	100	100	120	30
100	100	100	100	125	100	100	100	100	100	100	100	31
26	26	27	27	27	25	25	23	22	25	23	13	Count
100	100	100	100	100	100	100	100	100	100	105	115	Median
100	100	100	100	105	105	105	105	110	105	110	110	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 72 seconds.

Characteristic : h'Es

Unit : Km

Month : July 1960

TABLE 10—*contd.*

Ionospheric Data

75°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	120	..	..	..	..	..	G	100	100	100	100	100
2	..	..	..	..	..	..	G	100	100	100	100	C
3	..	..	..	..	..	..	G	G	100	100	100	100
4	..	..	..	..	..	..	G	100	100	100	100	100
5	..	..	..	..	..	..	G	100	100	100	100	100
6	..	..	..	..	..	..	G	100	100	100	100	100
7	120	..	..	..	..	..	120	100	100	100	100	100
8	120	120	..	..	..	130	120	100	100	100	100	100
9	150	..	..	..	..	..	100	100	100	100	100	100
10	..	100	100	..	..	..	..	100	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C
14	100	100	..	..	110	100	G	100	100	100	100	100
15	..	..	..	..	..	..	120	100	100	100	100	100
16	..	..	..	..	..	..	..	100	100	100	100	100
17	..	..	..	120	..	..	G	120	120	100	100	100
18	100	..	120	120	..	..	120	115	100	100	100	100
19	100	..	..	..	..	..	100	100	100	100	100	100
20	..	..	..	..	..	..	G	105	100	100	100	100
21	..	..	..	120	..	..	120	105	100	100	100	100
22	100	100	120	120	..	..	105	100	100	100	100	100
23	120	115	120	115	..	..	175	105	100	100	100	100
24	..	..	120	110	..	..	120	140	100	100	100	100
25	125	115	125	135	..	105	..	100	100	100	100	100
26	..	..	..	..	..	..	105	100	100	100	100	100
27	..	..	..	..	..	..	G	100	100	100	100	100
28	100	120	140	110	..	..	G	100	100	100	100	100
29	..	..	..	..	..	..	115	100	100	100	100	100
30	..	..	..	..	..	..	G	G	100	100	100	100
31	105	100	115	110	..	..	G	115	100	100	100	100
Count	12	8	8	9	1	3	12	26	27	27	27	26
Median	110	110	120	120	..	..	120	100	100	100	100	100
Mean	115	110	120	120	..	..	120	105	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : July 1960

TABLE 10—contd.

Ionospheric Data

75°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
100	100	100	100	100	100	100	100	100	100	100	100	1
C	C	C	100	100	100	100	100	100	100	105	..	2
100	100	100	100	100	100	120	100	100	100	100	..	3
100	100	100	100	G	100	100	..	..	120	110	..	4
100	100	100	100	100	G	100	..	..	..	..	..	5
100	100	100	100	100	110	100	120	100	100	110	..	6
100	100	100	100	100	100	100	..	135	..	125	120	7
100	100	G	115	100	100	100	110	100	100	100	120	8
100	100	100	100	100	G	100	..	..	..	105	..	9
C	C	100	100	100	C	C	C	C	C	C	C	10
C	C	C	C	C	C	C	C	C	C	C	C	11
C	C	C	C	C	C	C	C	C	C	C	C	12
100	100	100	100	110	100	100	100	100	100	100	100	13
100	100	100	100	100	100	100	120	100	100	100	..	14
100	100	100	100	100	100	100	100	120	135	120	120	15
100	100	100	100	100	100	100	105	105	100	105	100	16
100	100	100	105	110	120	110	110	100	100	120	120	17
100	100	100	100	105	..	..	140	140	100	100	..	18
100	100	100	100	100	100	100	100	100	100	140	120	19
100	100	120	B	140	140	..	120	125	..	100	..	20
100	100	100	100	105	100	100	100	100	100	100	100	21
C	100	100	100	115	115	..	..	..	135	120	125	22
100	100	100	105	100	100	100	100	100	105	100	105	23
100	100	150	G	125	135	100	..	..	120	..	110	24
100	100	100	100	100	100	100	100	100	100	..	..	25
100	100	100	100	100	100	100	100	100	100	100	100	26
100	100	100	100	115	105	100	105	105	120	115	120	27
100	100	100	100	100	100	100	100	100	100	..	..	28
100	100	100	100	100	100	100	100	110	100	120	..	29
100	100	100	100	100	100	100	100	100	100	140	90	30
100	100	100	100	100	100	100	100	100	100	90	..	31
25	26	26	26	28	25	25	22	23	24	24	15	Count
100	100	100	100	100	100	100	100	100	100	105	110	Median
100	100	105	100	105	105	100	105	105	105	110	110	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M3000)F<sub>2</sub>

TABLE 11

Latitude : 10.2°N

Unit :

Ionospheric Data

Longitude : 77.5°E

Month : July 1960

75°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	F	F	F	F	F	F	2.90 <sub>F</sub>	2.75	2.50	2.20	2.20	2.20
2	2.70	F	F	u2.30 <sub>F</sub>	2.45	2.70	2.80	2.85	2.60	2.30	2.20	2.20
3	2.75	2.90	2.85	2.85	2.90	3.05	3.05	2.95	2.75	2.45	2.30	2.25
4	2.85	2.70	2.65	2.75	2.75	2.80	2.85	2.80	2.55	2.35	2.15	2.10
5	2.75	2.80	2.85	2.90	2.95	2.85	2.95	2.80	2.65	2.50	2.30	2.15
6	u2.75 <sub>s</sub>	2.85	2.95	2.80	2.60	2.90	2.95	2.90	2.70	2.40	2.20	2.20
7	u2.65 <sub>s</sub>	FS	2.60 <sub>F</sub>	2.60	2.95	3.10	3.00	2.70	2.50	2.30	2.25	2.25
8	F	F	F	u2.95 <sub>FS</sub>	3.20	3.30	3.00	2.65	2.40	2.35	2.30	2.30
9	F	F	F	F	3.00	3.35	3.00	2.80	2.50	2.25	2.35	2.35
10	u2.70 <sub>s</sub>	2.70	2.60	2.60	2.75	3.20	3.00	2.85	2.55	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C
14	3.15	2.95	2.95	2.75	2.65	2.60	3.05	j3.05 <sub>s</sub>	2.75	2.45	2.20	2.55
15	2.65	2.15	2.20	F	F	F	3.05	3.00	2.75	2.35	2.30	2.35
16	3.10	2.95	3.05	3.35	3.10	3.30	3.05	2.90	2.75	2.35	j2.30 <sub>R</sub>	2.25
17	u2.60 <sub>F</sub>	2.75	2.75	u2.75 <sub>s</sub>	3.10	2.95	3.05	3.10	2.90	2.80	2.45	2.20
18	F	F	F	F	F	3.50	3.10	3.10	2.80	2.55	2.30	2.30
19	2.80	2.80	3.00	2.90	2.75	3.00	3.00	2.90	2.75	2.65	2.45	2.20
20	u2.80 <sub>s</sub>	2.75	u2.70 <sub>sH</sub>	2.65	2.75	3.40	3.00	3.00	u2.70 <sub>F</sub>	2.40	2.30	2.35
21	3.00	u3.20 <sub>s</sub>	2.60	2.40	2.90	3.10	2.90	2.95	2.80	2.40	2.20	2.40
22	2.50	F	F	F	F	u3.25 <sub>s</sub>	3.05	2.75	2.45	2.30	2.40	2.40
23	F	F	F	F	F	F	u3.15 <sub>s</sub>	2.95	2.70	2.30	2.15	2.20
24	F	F	u2.80 <sub>F</sub>	2.85 <sub>F</sub>	3.05	3.35 <sub>F</sub>	3.05	3.20	3.00	2.65	2.30	2.30
25	2.70	2.60	2.55	u2.55 <sub>s</sub>	F	3.20	3.20	3.05	2.80	2.40	2.20	2.40
26	2.75	2.85	3.00	3.15	3.35	3.30	3.15	3.00	2.70	2.40	2.30	2.25
27	2.75	2.85	2.95	3.10	3.30	3.25	3.15	3.00	2.65	2.30	2.40	2.40
28	2.85	2.85	2.70	2.70	3.10 <sub>F</sub>	3.55	3.15	3.00	2.60	2.30	C	2.45
29	3.30	u3.15 <sub>s</sub>	3.20	3.25	3.30	3.35	3.05	3.05	2.70	2.35	2.35	2.40
30	2.55	2.40	2.35	F	F	F	u3.05 <sub>F</sub>	2.85	2.70	2.25	2.25	2.25 <sub>II</sub>
31	3.05	3.15	3.10	3.00	3.15	3.25	3.20	3.15	3.05	2.80	2.40 <sub>II</sub>	2.25 <sub>II</sub>
Count	22	19	21	21	21	24	28	28	28	27	26	27
Median	2.75	2.85	2.80	2.80	2.95	3.20	3.05	2.95	2.70	2.35	2.30	2.25
Mean	2.80	2.80	2.80	2.80	2.95	3.15	3.05	2.95	2.70	2.40	2.30	2.30

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M3000)F2

TABLE 11

Latitude : 10.2°N

Unit :

Ionospheric Data

Longitude : 77.5°E

Month : July 1960

75°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
2.20	2.20	2.25	2.35	2.45	u2.50s	2.50	2.45	2.30	F	F	F	1
C	C	C	2.15	2.20	2.30	2.40	2.45	2.45	2.55	2.50	2.60	2
2.15	2.10	2.20	2.20	2.35	2.45	2.50	2.45	2.55	2.55	2.60	2.75	3
2.20	2.10	2.20	2.25	2.20	2.40	u2.55s	2.45	2.45	2.45	2.50	2.55	4
2.10	2.10	2.10	2.20	2.20	2.35	2.35	2.20	2.20	u2.40s	2.50	2.60	5
2.15	2.15	2.15	2.20	2.25	2.30	u2.30s	2.30	u2.20sF	2.40F	2.45	2.55	6
2.25	2.10	2.05	2.20	2.20	2.25	2.35	2.30	F	F	F	F	7
2.35	2.30	2.35	2.45	2.50	2.65	2.60	u2.55s	2.55	2.60	2.55	2.60	8
2.30	2.20	2.20	2.35	2.50	2.65	2.65	2.60	2.45	2.50	2.45	2.55	9
C	C	2.25	2.25	2.25	2.30	C	C	C	C	C	C	10
C	C	C	C	C	C	C	C	C	C	C	C	11
C	C	C	C	C	C	C	C	C	C	C	C	12
2.60	2.50	2.40	2.25	2.30	2.45	j2.65s	2.65	2.65	2.70	2.65	2.80	13
2.20	2.50	2.25	2.35	2.50	2.45	2.30	u2.15s	F	2.50	2.70	u3.10s	14
2.25	2.35	2.35	2.30	2.30	2.35	u2.30s	u2.40s	u2.15F	2.25	F	u2.55F	15
2.30	2.25	2.20	2.30	2.45	2.45	2.40	2.30	u2.20F	2.25	u2.40F	F	16
2.35	2.30	2.50	2.45	2.45	2.50	2.55	2.50	2.50	2.60	2.65	2.65	17
2.15	2.30	2.30	2.30	2.35	2.50	2.65	2.60	2.55	2.60	2.60	2.65	18
2.45	2.35	2.40	2.40	2.65	u2.75R	2.75	2.80	2.70	u2.70s	2.65	u2.90s	19
2.40	2.30	2.20	2.25	2.30	u2.45s	2.55	2.45	2.40	u2.45s	2.50	2.50	20
2.45	2.30	2.40	2.40	2.45	2.50	2.50	2.35	F	F	F	F	21
2.25	2.30	2.30	2.25	2.30	2.50	2.55	2.45	2.30F	F	F	F	22
2.35	2.30	2.30	2.30	2.45	2.55	2.50H	2.40	F	F	F	F	23
2.30	2.20	2.40	2.35	2.45	2.60	2.75	2.70	2.65	2.50	2.45	u2.65F	24
2.20	2.10	2.30	2.30	2.35	2.50	2.55	2.60	2.60	2.65	2.65	2.70	25
2.30	2.25	2.30	2.30	2.40	2.60	2.55	2.50	j2.40F	F	2.60	2.70	26
2.40	2.10H	2.25	2.25	2.35	2.40	2.70	2.70	2.70	2.80	2.80	3.05	27
2.35	2.40	2.25	2.10	2.20	2.40	2.50	2.40	2.40	F	u2.55F	2.70	28
2.35	2.30	2.30	2.30	2.20	2.20	2.50	2.40	2.55	2.60	2.60	2.85	29
2.30	2.30	2.20	2.30	2.40	2.60	2.60	2.55	2.60	2.60	2.75	u2.75s	30
26	26	27	28	28	29	28	28	24	21	22	22	Count
2.30	2.30	2.25	2.30	2.35	2.45	2.55	2.45	2.50	2.55	2.60	2.70	Median
2.30	2.25	2.25	2.30	2.35	2.45	2.50	2.50	2.45	2.55	2.60	2.70	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : (M3000)F<sub>2</sub>

TABLE II (contd.)

Latitude : 10°2'N

Unit :

Ionospheric Data

Longitude : 77°5'E

Month : July 1960

75°E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	F	F	F	F	F	F	2.90	2.60	2.35	2.20	2.10	2.10
2	2.80	F	u2.45F	2.30	2.65	2.75	2.95	2.80	2.45	2.20	2.10	C
3	2.85	2.90	2.80	2.85	2.95	3.15	3.05	2.85	2.60	2.30	2.20	2.15
4	2.80	2.70	2.70	2.70	2.70	2.95	2.85	2.75	2.50	2.15	2.15	2.10
5	2.70	2.80	2.80	2.90	2.85	2.90	2.90	2.70	2.55	2.45	2.30	2.15
6	u2.75s	2.90	2.90	2.60	2.80	3.00	2.85	2.65	2.50	2.30	2.20	2.15
7	u2.55F	2.55F	2.60	2.80	3.05	3.15	2.85	2.65	2.30	2.25	2.30	2.30
8	F	F	F	3.10	3.30	3.05	2.90	2.50	2.40	2.30	2.35	2.30
9	u2.55F	F	F	u2.80F	3.10	3.05	2.85	2.75	2.40	2.30	2.30	2.35
10	2.75	2.75	2.55	2.75	2.90	3.00	2.90	2.70	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C
14	3.00	3.00	2.90	2.70	2.50	2.80	3.00	2.90	2.60	2.30	2.25	2.65
15	2.35	2.20	2.20F	F	E	2.70	3.05	2.95	2.60	2.15	2.40	2.30
16	3.00	3.00	3.20	3.40	3.15	3.45	2.90	2.90	2.70	2.25	2.35	2.30
17	u2.80s	2.80	u2.70s	u2.70s	3.20	3.00	3.15	2.90	2.90	2.75	2.30	2.20
18	F	F	F	F	u3.40s	3.10	3.20	2.95	2.65	2.35	2.35	2.40
19	2.80	2.90	3.00	2.85	2.85	2.95	3.00	2.90	2.80	2.55	2.25	2.15
20	2.80	u2.90s	2.65	2.70	2.80	3.00	3.00	u2.85s	2.60	2.30	2.35	2.40
21	3.20	2.90	2.30	u2.60R	3.30	2.90	2.90	2.90	2.65	2.20	2.35	2.40
22	F	F	F	F	u3.15F	3.20	2.90	2.65	2.35	2.40	2.35	2.30
23	F	F	F	F	F	F	u3.10F	2.90	2.50	2.15	2.50	2.30
24	F	F	u2.85F	2.95	3.25	3.15	3.20	3.05	2.85	2.45	2.10H	2.35
25	2.65	2.55F	2.50	F	F	3.10	3.20	2.90	2.60	2.10	2.30	2.35
26	2.75	u2.95s	3.10	3.20	3.30	3.10	3.05	2.80	2.60	2.35	2.30	2.25
27	2.75	2.95	3.05	3.20	3.25	3.05	3.05	2.80	2.60	2.40	2.40	2.35
28	2.85	2.80	2.65	F	3.30	2.90	3.15	2.85	2.45	2.30	2.35	2.35
29	3.30	3.20	3.25	3.25	3.40	3.35	3.10	2.95	2.50	2.30	2.30	2.35
30	2.45	2.30	F	F	F	F	2.90	2.80	2.55	2.15	2.20	2.40
31	3.20	3.15	3.05	2.95	3.30	2.95	3.15	3.05	2.95	2.60	2.20H	2.30
Count	22	20	21	20	23	25	28	28	27	27	27	26
Median	2.80	2.90	2.80	2.80	3.15	3.00	3.00	2.85	2.60	2.30	2.30	2.30
Mean	2.80	2.80	2.75	2.85	3.05	3.05	3.00	2.80	2.55	2.30	2.30	2.30

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds

Characteristic : (M3000)F<sub>2</sub>

Unit :

Month : July 1960

TABLE II (contd.)

Ionospheric Data

75°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.10	2.20	2.25	2.40	u2.45s	2.45	2.50	2.35	2.35 <sub>F</sub>	2.35	F	2.65	1
C	C	C	2.20	2.25	2.40	2.45	2.45	2.55	2.55	2.55	2.70	2
2.10	2.20	2.20	2.35	2.45	2.50	2.50	2.50	2.55	2.60	2.60	2.85	3
2.15	2.10	2.20	2.20	2.30	2.45	2.50	2.45	2.50	2.50	2.60	2.70	4
2.10	2.10	2.10	2.20	2.30	2.30	2.30	2.20	2.35	2.40	2.55	C	5
2.15	2.10	2.20	2.25	2.30	2.35	2.35	u2.25s	2.30	2.40	2.45	u2.60 <sub>F</sub>	6
2.15	2.10	2.10	2.25	2.20	2.30	u2.40s	2.30	F	F	F	F	7
2.35	2.30	2.40	2.45	2.60	2.60	2.60	2.50	2.50	2.55	2.60	u2.60 <sub>F</sub>	8
2.30	2.15	2.30	2.45	2.65	2.70	2.70	2.50	2.45	2.45	2.45	2.65	9
C	C	2.30	2.30	2.25	C	C	C	C	C	C	C	10
C	C	C	C	C	C	C	C	C	C	C	C	11
C	C	C	C	C	C	C	C	C	C	C	C	12
C	C	C	C	2.40	2.60	2.60	2.70	2.65	2.70	2.65	3.00	13
2.50	2.40	2.30	2.20	2.35	u2.60s	2.65	2.60	2.65	2.70	2.95	2.85	14
2.20	2.30	2.25	2.45	2.50	2.35	u2.25s	F	u2.40 <sub>F</sub>	S	u2.95s	3.05	15
2.30	u2.40s	2.30	2.30	2.35	2u.30s	u2.30s	u2.20s	u2.30 <sub>sf</sub>	F	F	u2.40 <sub>F</sub>	16
2.30	2.30	2.30	2.40	2.50	u2.50s	2.40	u2.25su	u2.20 <sub>F</sub>	u2.35 <sub>F</sub>	u2.45 <sub>F</sub>	F	17
2.25	2.40	2.45	2.45	2.50	2.55	2.60	2.50	u2.55 <sub>F</sub>	2.60	2.60	2.80	18
2.20	2.35	2.30	2.30	2.30	2.60	2.65	2.60	2.50	2.55	2.60	u2.70s	19
2.30	2.45	2.40	2.55	2.70	2.75	2.80	2.70	2.70	2.75	u2.80s	u2.90s	20
2.40	2.25	2.30	2.25	2.40	u2.60s	u2.60s	2.40	2.40	2.50	2.50	2.50	21
C	2.30	2.40	2.45	2.40	2.50	2.45	2.30	F	F	u2.45 <sub>F</sub>	F	22
2.35	2.30	2.25	2.25	2.35	2.55	2.55	2.40	u2.35 <sub>F</sub>	F	F	F	23
2.30	2.30	2.35	2.35	2.45	2.50 <sub>H</sub>	2.50	F	F	F	F	2.60	24
2.30	2.30	2.35	2.40	2.50	2.70	2.80	2.65	2.60	2.45	2.50	2.75	25
2.20	2.20	2.30	2.35	2.45	2.55	2.55	2.55	2.65	2.65 <sub>F</sub>	2.70	2.70	26
2.30	2.30	2.30	2.30	2.45	2.50	2.45	2.40	F	2.55	2.70	2.75	27
2.25	2.25	2.30	2.25	2.30	2.55	2.65	2.70	2.75	2.85	2.80	3.05	28
2.40	2.30	2.20	2.10	2.35	2.45	2.45	2.40	2.40	F	2.60	2.65	29
2.30	2.30	2.25	2.30	2.20	2.35	2.45	2.50	2.55	2.60	2.65	2.95	30
2.35	2.20	2.30	2.30	2.50	2.60	2.60	2.55	2.60	2.70	2.70	S	31
25	26	27	28	29	28	28	26	24	21	23	22	Count
2.30	2.30	2.30	2.30	2.40	2.50	2.50	2.50	2.50	2.55	2.60	2.70	Median
2.25	2.25	2.30	2.30	2.40	2.50	2.50	2.45	2.50	2.55	2.65	2.75	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF<sub>2</sub>

Unit : Mc

Month : August 1960

TABLE 12

Ionospheric Data

75°E Mean Time

Latitude : 10°2'N

Longitude 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	9.0	7.7	6.8	5.8	4.7	2.8	6.4	9.2	10.0	10.5	10.8	10.6
2	8.8	8.2	8.5	7.8	6.3	5.1	6.6	9.2	10.2	9.8	8.7	8.4
3	8.5	7.3	6.8	5.5	4.8	3.8	6.3	8.7	9.4	9.3	9.3	8.9
4	10.0	8.6	6.2	5.7	5.4	5.2	7.1	8.9	9.5	9.8	8.8	8.6
5	10.2	9.4	8.0	5.9	4.3	3.1	6.1	8.6	10.0	9.8	9.4	9.0
6	8.6	7.9	7.3	7.2	5.8	4.0	5.8	8.4	9.3	9.1	8.4	8.2
7	8.2	7.6	6.7	5.6	4.5	3.2	5.6	8.2	9.4	C	C	C
8	8.8	7.8	7.4	6.8	6.3	5.3	6.9	8.8	10.1	10.4	8.8	8.6
9	6.8	u5.4s	F	F	F	3.7	6.2	9.4	10.1	10.8	9.9	9.3
10	7.2	j5.4RH	3.6	3.6	3.8	j2.3R	6.0	9.2	10.6	11.2	11.4	10.8
11	8.5	7.9	6.9F	F	6.5F	6.2	7.4	FS	11.4	11.4	10.8	10.8
12	11.4	8.4	7.1	7.0	6.4	5.8	7.5	9.4	j10.0R	11.0	11.1	11.0
13	9.9	6.8	4.9	4.6	5.1	4.7	6.4	9.7	10.6	10.8	10.4	10.2
14	j10.0F	10.0	8.5	8.7	8.9	8.4	8.8	10.6	10.8	10.7	10.4	10.6
15	11.2	10.4	10.5	9.1	6.8H	6.3	8.4	10.6	11.1	11.0	10.7	10.4
16	FS	8.8	8.3F	F	7.4	6.6	8.2	11.1	12.1	12.2	11.8	11.3
17	F	F	F	F	F	F	u8.8FH	10.9	12.5	12.2H	12.3H	14.2
18	9.2	8.4	6.4	6.1	6.8	7.0	6.5	10.2	12.0	12.2	11.8	12.0
19	u11.7FS	F	F	F	8.6	5.7	7.2	10.1	11.8	12.0	11.5	11.5
20	F	F	F	10.2	F	F	9.6	11.4	12.3	13.3	13.7	u13.0R
21	u12.0s	11.1	10.3	10.5	9.5	5.1	7.0	10.4	u11.7s	10.9	10.4	10.9
22	F	F	u10.5F	FS	8.0	6.5	8.0	10.7	u11.9F	12.1	12.8	13.3
23	12.3	11.8	10.4	9.5	u8.7R	5.3	6.7	10.1	11.3	11.5	11.3	10.7
24	11.5	11.0	9.8	9.1	6.9	3.7R	6.6	10.0	11.1	9.9	8.9	8.9
25	F	u9.7F	9.6	F	F	F	6.8	9.4	10.7	11.1	11.3	11.1
26	F	F	F	8.4	8.1	5.7	6.2	9.5	11.1	11.0	10.0	9.6
27	11.4	F	10.4	F	F	6.8	6.2	9.4	10.8	11.4	10.8	9.8
28	F	F	F	8.4F	7.6F	F	8.4	9.5	11.7	12.4	12.7	13.0
29	10.0	C	9.8	7.8	6.7	5.2	6.4	9.2	10.4	10.8	8.9	9.0
30	10.6	u9.2s	u7.2s	6.6	6.1	5.8	7.4	10.2	11.7	12.2	12.7	13.0
31	u11.8s	u9.5s	u6.2s	5.0	3.6	3.3	6.3	9.8	11.3	12.0	12.2	11.7
Count	24	23	25	23	26	27	31	30	31	30	30	30
Median	10.0	8.4	7.4	7.0	6.4	5.2	6.7	9.5	10.8	11.0	10.8	10.6
Mean	9.9	8.6	7.9	7.2	6.4	5.0	7.0	9.7	10.9	11.1	10.7	10.6

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF<sub>2</sub>  
Unit : Mc  
Month : August 1960

TABLE 12  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
10.0	9.5	9.2	9.0	8.8	9.4	10.1	9.7	8.6	7.8	8.7	9.0	1
8.8	8.8	8.7	9.0	9.4	9.4	9.5	9.4 <sub>s</sub>	F	8.2 <sub>F</sub>	9.0	9.6 <sub>s</sub>	2
9.4	9.4	9.7	10.6	10.8	11.5	12.3	11.3	10.3	9.3	9.6	9.7	3
8.9	8.6	8.4	8.6	8.9	9.5	9.8	10.0	9.3	8.6	9.1	9.7	4
9.0	9.3	10.0	10.8	11.0	11.6	11.0	10.4	9.5 <sub>F</sub>	8.6 <sub>F</sub>	8.1	8.8	5
8.2	8.6	9.0	9.6	10.6	10.8	11.3	10.5	9.5	8.8	8.4	8.2	6
C	C	C	9.2	9.0	9.2	9.6	10.2	9.2	9.0	9.0	9.4	7
8.3	7.9	8.1	8.6	8.9	9.0	9.4	9.4	8.1	8.2	8.4	7.8	8
9.6	10.4	10.8	12.4	11.9	12.2	12.2	13.0	14.0	10.4	8.2	8.0	9
9.4	9.6	9.7	9.8	10.4	11.4	11.0	9.6	F	F	F	9.1 <sub>F</sub>	10
10.6	10.7	10.1	10.2	10.2	10.4	10.9	10.5	9.8	8.6	F	F	11
10.9	10.7	11.3	12.2	12.5	12.2	11.4	11.4	11.4	11.8	11.5	11.4	12
10.6	10.4	10.4	10.2	10.1	9.7	9.5	8.0	F	F	F	F	13
10.8	10.8	11.3	11.6	12.6	12.4	11.7	10.8	10.0 <sub>F</sub>	9.8 <sub>F</sub>	F	11.3	14
10.3	10.6	10.4	10.6	11.1	11.2	11.3	9.9	F	F	F	F	15
11.2	11.6	11.6	11.6	11.4	11.1	10.7	10.1	F	F	F	F	16
13.8	12.6	11.4 <sub>WH</sub>	10.9	12.4	12.3	11.9	11.6	11.3	11.5	10.3	10.0	17
12.0	11.6	12.0	11.8	11.6	11.7	11.2	10.2 <sub>s</sub>	F	F	10.3 <sub>F</sub>	11.2	18
11.5	11.5	11.8	12.1	12.0	12.2	12.2	10.9	9.9	F	F	F	19
11.8	12.8	13.2	13.6	13.4	13.6	13.2	12.2	12.4	12.9	13.7	13.1	20
10.9	10.6	10.2	10.2	10.4	10.4	9.9 <sub>s</sub>	9.0	F	F	9.0 <sub>F</sub>	F	21
12.7	11.5	10.7	10.5	10.4	10.5	10.2	9.3	F	F	10.8	F	22
10.5	10.1	10.7	11.5	11.5	11.0	10.5 <sub>s</sub>	9.4 <sub>F</sub>	F	F	10.5	11.6	23
9.0	9.5	9.7	10.1	10.6	10.7	10.2	9.7	F	F	F	10.5 <sub>F</sub>	24
11.3	11.6	12.2	12.4	13.4	14.0	14.1	12.7	11.7 <sub>s</sub>	11.7 <sub>s</sub>	11.4	11.4	25
9.1	9.6	9.8	10.4	10.6	10.9	11.1	9.4 <sub>F</sub>	8.2 <sub>F</sub>	F	F	F	26
9.9	10.3	10.8	11.1	11.8	11.8	12.7	11.2	F	F	F	F	27
12.4 <sub>RH</sub>	11.5	10.9	11.3	12.0 <sub>R</sub>	12.2	12.4	11.7 <sub>s</sub>	11.2	11.1	10.8	10.4	28
10.9	12.0	12.8	12.8	12.7	12.6	12.2	12.0	S	12.1	11.5	11.0	29
13.5	13.5	13.7	14.2	13.7	14.4	13.7	11.8 <sub>s</sub>	11.6	11.7	12.3 <sub>R</sub>	12.4	30
11.3	11.4	11.6	11.8	12.6	12.8	12.5	11.4	11.0	11.4	11.6 <sub>F</sub>	11.6	31
30	30	30	31	31	31	31	31	19	18	20	22	Count
10.6	10.6	10.7	10.8	11.1	11.4	11.2	10.4	10.0	9.6	10.0	10.2	Median
10.6	10.6	10.7	10.9	11.2	11.4	11.3	10.5	10.4	10.0	10.0	10.2	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF<sub>2</sub>

Unit : Mc.

Month : August 1960

TABLE 12—Contd.

Ionospheric Data

75°E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	8.0	7.1	6.6	5.4	3.5	4.0	8.1	9.1	10.4	10.9	10.6	10.2
2	8.4	8.2	8.4	7.4	5.7	5.0	8.0	9.6	10.0	9.4	8.6	8.6
3	7.6	6.8	u6.1s	4.7	4.4	4.5	7.9	9.3	9.3	9.3	9.0	9.3
4	j9.9s	7.3	6.2	5.4	5.3	5.6	8.3	9.0	9.5	9.4	8.8	8.7
5	9.6	8.7	7.7	u5.1s	3.6	4.2H	7.8	9.4	10.1	9.8	9.0	9.1
6	8.2	7.6	7.4	6.6	5.1	4.0	7.2	9.1	9.6	8.8	8.4	8.2
7	8.0	7.4	6.0	5.2	4.0	4.0	7.0	8.7	9.5	C	C	C
8	8.1	7.6	u7.1s	6.6	5.8	5.5	8.2	9.8	10.2	9.8	8.6	8.4
9	u6.2s	u4.4F	F	F	F	4.1	8.0	9.8	10.8	10.4	9.2	9.4
10	5.8	j4.4RH	3.4	3.8	3.3	3.6	8.2	10.1	11.0	11.4	11.4	9.6
11	8.4	u7.7F	F	F	6.7	6.2	8.7	u11.3F	11.7	11.3	11.0	10.7
12	10.1	7.5	7.1	6.6	6.2	6.1	8.6	9.4	10.8	11.0	11.0	10.7
13	8.5	5.7	4.5	4.8	4.9	5.0	8.3	10.2	10.8	10.4	10.2	10.3
14	u10.6F	9.0	8.5	9.1	8.5	8.0	9.5	10.8	10.6	10.4	B	10.8
15	u10.6F	10.3	10.0	8.0H	6.8H	7.0	9.5	11.1	11.1	10.7	10.6	10.3
16	F	8.6	8.0	7.8	7.0	6.5	9.8	11.4	12.6	11.8	11.4	11.1
17	F	F	F	F	F	F	9.9	11.7	12.6	12.2H	13.4	14.3
18	9.0	7.0	6.2	6.4	6.9	7.2	8.4	11.2	12.1	12.0	12.0	11.8
19	F	F	F	u9.7s	7.2	4.8	8.8	11.2	12.0	11.7	11.6	11.8
20	F	C	u10.4C	F	F	8.1	10.8	12.0	12.8	13.8	u13.4R	12.4
21	11.4	10.6	10.3	10.3	7.9	4.7	8.8	11.5	11.6	10.2	10.7	11.0
22	F	F	10.3	9.4	7.3	6.4	9.4	11.6	12.0	12.7	13.2	13.1
23	12.0	11.3	10.3	9.1	7.2	4.7	8.5	10.7	11.7	11.4	10.8	10.6
24	11.3	10.2	9.6	8.4	5.5	4.3H	8.4	10.8	10.8	9.2	8.8	9.0
25	F	9.2	u9.5F	8.7	F	4.7	8.6	9.9	10.7	11.2	11.0	11.3
26	11.0	F	u8.3F	8.0	8.0	4.4	8.0	10.4	11.3	10.8	9.8	9.2
27	F	F	F	F	7.8	4.9	8.1	10.1	11.2	11.4	10.4	9.8
28	F	10.6F	F	8.0	F	F	u9.2s	10.7	12.0	12.2	12.9	12.8
29	10.0	u9.8s	9.0	u7.4s	6.0	4.5	8.1	10.0	10.8	9.9	8.0	9.8
30	9.8	8.2	6.9	6.5	5.6	6.1	9.2	11.2	11.8	C	12.8	13.5
31	10.6	u7.3s	5.4	4.2	3.5	4.0	8.0	10.6	12.0	12.2	11.7	11.3
Count	23	25	25	26	26	29	31	31	31	29	29	30
Median	9.6	7.7	7.7	7.0	5.9	4.8	8.4	10.4	11.0	10.9	10.7	10.6
Mean	9.3	8.1	7.4	7.0	5.9	5.2	8.6	10.4	11.1	10.9	10.6	10.6

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF<sub>2</sub>

Unit : Mc

Month : August 1960

TABLE 12—Contd.

Ionospheric Data

75°E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
9.8	9.5	9.0	8.8	8.9	9.9	10.0	9.0	8.0	8.0	9.1	9.0	1
9.0	8.8	8.8	9.0	9.4	9.5	9.5	8.7	u8.2 <sub>F</sub>	8.6	u9.4 <sub>s</sub>	10.3	2
9.4	9.6	10.2	10.8	11.1	12.3	12.2	11.0	9.8	9.5	9.2	10.1	3
8.7	8.4	8.4	8.8	9.1	9.8	10.2	9.5	8.7	9.2	9.2	10.1	4
9.1	9.3	10.5	11.0	11.0	11.5	10.8	10.0	u8.8 <sub>F</sub>	8.5	8.5	8.8	5
8.3	8.8	9.2	10.0	10.6	11.2	11.0	10.0	9.0	8.4	8.4	8.3	6
C	C	9.3	9.0	9.1	9.4	10.0	9.6	9.0	9.0	9.2	9.2	7
8.2	8.0	8.4	8.8	8.9	9.2	9.5	8.8	8.1	8.4	8.2	u7.2 <sub>s</sub>	8
9.8	10.6	11.6	12.4	11.8	12.0	12.5	13.8	12.5	u9.2 <sub>s</sub>	8.2	7.9	9
9.3	9.8	9.6	10.4	10.9	11.4	10.4	F	F	F	F	9.2 <sub>F</sub>	10
10.6	10.4	10.2	10.2	10.2	10.2	10.6	10.1	9.4	8.0	F	F	11
11.0	11.0	11.6	12.3	12.4	11.6	11.4	11.2	11.5	12.0	11.2	10.9	12
10.5	10.4	10.2	10.2	10.0	9.6	8.8	F	F	F	F	F	13
11.0	11.0	11.2	12.1	12.5	12.1	11.6	u10.2 <sub>F</sub>	F	u10.6 <sub>F</sub>	F	11.2	14
10.5	10.5	10.5	11.0	11.0	11.4	10.8	8.7 <sub>F</sub>	u7.8 <sub>F</sub>	F	F	F	15
11.6	11.6	11.6	11.5	11.1	11.0	10.4	9.4 <sub>F</sub>	F	F	F	u8.6 <sub>F</sub>	16
13.2	12.4	10.3	11.8	12.5	12.3	11.8	11.4	11.4	10.9	10.0	9.5	17
11.7	11.6	12.0	11.6	11.7	u11.5 <sub>s</sub>	10.6	u9.4 <sub>s</sub>	F	F	F	11.6	18
11.5	11.7	12.1	12.0	12.0	12.4	11.7	10.2	F	F	F	F	19
12.3	13.0	13.3	13.6	13.6	13.6	12.6	12.3	12.4	13.2	13.6	12.5	20
10.7	10.4	10.1	10.2	10.4	10.3	9.3	8.6	F	F	u8.5 <sub>F</sub>	9.7	21
12.2	10.8	10.5	10.7	10.5	10.3	9.9	F	F	F	F	F	22
10.3	10.2	11.1	11.4	11.3	10.7	10.2	F	F	10.3	10.8	11.7	23
9.2	9.4	9.8	10.3	10.7	10.7	10.3	u8.9 <sub>F</sub>	F	F	F	F	24
11.4	11.9	12.2	12.8	13.8	14.4	13.4	12.1	u11.6 <sub>s</sub>	F <sub>s</sub>	F <sub>s</sub>	11.4	25
9.3	u9.6 <sub>s</sub>	10.0	10.4	10.8	11.0	10.6	9.0	F	F	F	F	26
10.0	10.6	10.8	11.4	11.7	12.2	12.1	10.3	F	F	F	F	27
11.5	11.2	10.9	11.6	u11.8 <sub>s</sub>	12.7	12.4	11.6	11.0	11.2	10.6	10.2	28
11.7	12.6	12.8	12.7	12.8	12.5 <sub>H</sub>	S	11.8 <sub>s</sub>	u12.0 <sub>s</sub>	u11.8 <sub>s</sub>	11.3	10.9	29
13.7	13.7	13.8	14.1	14.1	14.3	12.8	11.8	11.7	11.7	12.9	12.6	30
11.5	11.6	11.6	12.0	12.7	12.7	11.8	10.8	11.0	11.4	11.5	12.1	31
30	30	31	31	31	31	30	27	19	19	18	23	Count
10.6	10.6	10.5	11.0	11.1	11.4	10.7	10.1	9.8	9.5	9.3	10.1	Median
10.6	10.6	10.7	11.1	11.2	11.4	11.0	10.3	10.1	10.0	10.0	10.1	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

450

Characteristic : foF<sub>1</sub>

Unit : Mc

Month : August 1960

TABLE 13  
Ionospheric Data  
75°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	A	L	L
2								L	L	L	L	L
3								L	L	L	u5.2L	L
4							L	L	L	L	L	L
5								L	L	L	L	L
6								L	L	L	L	L
7								L	L	C	C	C
8								L	L	L	B	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16								L	L	L	L	L
17								L	L	L	L	A
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L <sub>h</sub>	L
24								L	L	L	L	L
25								L	L	L	L	L
26								L	L	L	A	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
31								L	L	L	L	L
Count							..	..	..	..	1	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

450

45<sup>I</sup>Characteristic : foF<sub>1</sub>

Unit : Mc.

Month : August 1960

TABLE 13  
Ionospheric Data  
75° E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	L	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
L	L	L	L	L	L							5
L	L	L	L	L	L							6
C	C	C	L	L	L							7
L	L	L	L	L	L							8
L	L	L	L	L	L							9
L	L	L	L	L	L							10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L <sub>H</sub>	L <sub>H</sub>	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	A	L	L							20
L	L	L	L	L	L							21
L	L <sub>H</sub>	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
L	L	L	L	L								31
..	..	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

45<sup>I</sup>



Characteristic : foF1

Unit : Mc.

Month : August 1960

TABLE 13—*contd.*

Ionospheric Data

75°E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4							L	L	L	L	L	L
5								L	L	L	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8							L	L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14							L	L	L	L	B	L
15								L	L	L	L	L
16							A	L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L <sub>H</sub>	L	L
24							L	L <sub>H</sub>	L	L	L	L
25								L	L	L	L	L
26								L	L	L	L	L
27							L	L	L	L	L	L
28							L	L	L	L	L	L
29								L	L	L	L	L
30								L	I	C	L	L
31							L	L	L	L	L	L
Count							..	..	..	..	..	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF<sub>1</sub>

Unit : Mc.

Month : August 1960

TABLE 13—*contd.*

Ionospheric Data

75 E Mean Time

Latitude : 10.2°N

Longitude : 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L	L							3
L	L	L	L	L								4
L	L	5.0	L	L								5
L	L		L	L								6
C	C	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L	L							11
L	L	L	L	L								12
L	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	L	L	L								16
L <sub>H</sub>	L <sub>M</sub>	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	A	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L								26
L	L	L	L	L								27
L	L	L	L	L								28
L	L	L	L	L								29
L	L	L	L	L								30
L	L	L	L	L								31
..	..	1	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE  
Unit : Mc.  
Month : August 1960

TABLE 14  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N.  
Longitude : 77°5'E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								A	A	A	A	A
2							R	A	A	A	A	A
3								A	A	A	A	A
4								A	A	A	A	A
5							R	A	A	A	A	A
6								A	A	A	A	B
7								A	A	C	C	C
8								2.9	A	A	B	A
9								2.6	A	A	A	A
10								2.7	A	A	A	A
11							1.8	A	A	A	A	A
12								3.0 <sub>H</sub>	3.3	A	A	A
13								A	A	A	A	A
14								3.0	A	A	A	B
15								A	A	A	A	A
16								A	A	A	A	A
17								A	A	A	A	A
18								A	A	A	A	A
19								A	A	A	A	A
20								A	A	A	A	A
21								A	A	A	A	A
22								u3.0 <sub>R</sub>	3.5	R	A	A
23								A	A	A	A	A
24								A	A	A	A	A
25								2.7	A	A	A	A
26								u3.0 <sub>A</sub>	A	A	A	A
27								2.8 <sub>H</sub>	A	A	A	A
28								u2.7 <sub>R</sub>	3.2 <sub>H</sub>	R	A	A
29								2.8	A	A	A	B
30								2.8 <sub>H</sub>	A	A	A	A
31								A	A	A	A	A
Count							I	12	3	..	..	..
Median							..	2.8	..	..	..	..
Mean							..	2.8	..	..	..	..

Sweep 1.0 Mc, to 25.0 Mc, in 27 seconds,

Characteristic : foE

Unit : Mc.

Month : August 1960

TABLE 14

Ionospheric Data

75°E Mean Time

Latitude : 10°2'N.

Longitude : 77°5.

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A	A	A						1
A	A	A	A	A	A							2
A	A	A	A	A	A							3
A	A	A	A	A	u2.6R							4
					A							5
A	A	A	A	A	A							6
C	C	C	A	A	A							7
A	A	A	A	A	A							8
A	3.9	A	A	A	A							9
A	A	A	A	A	u2.8R							10
A	A	A	A	A	A							11
A	A	A	3.7	A	A							12
A	A	A	A	A	A							13
A	A	A	A	A	A							14
A	A	A	A	A	2.9							15
					A							
A	A	A	A	A								16
A	A	A	A	A								17
A	A	A	R	A	A							18
A	A	A	A	A	A							19
B	R	A	A	A	A							20
A	A	A	A	A	A							21
A	A	A	A	A	A							22
A	A	A	A	A	A							23
A	A	A	A	A	A							24
		F	R	u3.3R	u2.7R							25
A	A	A	A	F	R							26
A	A	A	u3.6A	3.4	A							27
A	A	A	A	A	A							28
A	A	A	u3.5A	A	A							29
A	A	A	A	A	A							30
A	A	A	A	A	F							31
..	1	..	3	2	4	..						Count
..	..	..	..	..	..	..						Median
..	..	..	..	..	..	..						Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE

TABLE 14—(Contd.)

Latitude : 10° 2' N.

Unit : Mc

Ionospheric Data

Longitude : 77° 5' E.

Month : August 1960

75°E Mean Time

	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							A	A	A	A	A	A
2							2.4	A	A	A	A	A
3								A	A	A	A	A
4								A	A	A	A	A
5							U2.5R	A	A	A	A	A
6							A	A	A	A	A	A
7							2.2	A	A	C	C	C
8							2.4	A	A	A	B	A
9							2.4 <sup>H</sup>	A	A	A	A	A
10							2.4	A	A	A	A	A
11							A	A	A	A	A	A
12								3.0	A	A	A	A
13							2.5	A	A	A	B	A
14							2.5	A	A	A	B	A
15								A	A	A		
16							A	A	U3.8R	A	R	A
17							A	A	A	A	A	A
18							A	A	A	A	A	A
19								A	B	A	B	B
20												
21							R	A	A	A	A	A
22							A	3.3 <sup>RH</sup>	R	A	A	A
23								A	A	A	A	A
24							2.3 <sup>R</sup>	A	A	A	A	A
25							U2.5R	3.0	A	A	A	A
26							R	A	A	A	A	A
27							R	A	A	A	A	A
28							R	3.0 <sup>OH</sup>	3.3 <sup>R</sup>	A	A	A
29							2.4	3.1	A	A	A	A
30								2.9 <sup>H</sup>	A	C	A	A
31							A	A	A	A	A	A
Count							11	6	2	..	..	..
Median							2.4	3.0	..	..	..	..
Mean							2.4	3.0	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE  
Unit : Mc  
Month : August 1960

TABLE 14—(Contd.)  
Ionospheric Data  
75°E Mean Time

Latitude : 10.2° N.  
Longitude : 77.5° E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	A	A	A	A							1
A	A	A	A	A	A							2
A	A	A	A	A	A							3
A	A	A	A	A	A							4
A	A	A	A	R	A							5
A	A	B	A	A								6
C	C	A	A	A								7
A	A	A	A	A								8
A	A	A	A	A	u2.4F							9
A	A	A	A	A								10
A	A	A	A	A	2.5							11
A	A	3.8	B	A	A							12
A	A	A	A	A	A							13
A	4.0	A	A	2.9	A							14
A	A	A	A	A	A							15
A	A	A	A	A								16
A	A	A	A	A								17
A	A	B	A	A								18
A	A	A	A	A	A							19
B	u4.2R	A	A	A								20
A	A	A	A	A								21
A	A	A	A	A								22
A	A	A	A	A								23
A	A	A	A	A								24
A	u4.0F	R	3.4	B	u2.3R							25
A	A	A	A	F								26
A	A	A	A	2.8								27
A	A	A	A	A								28
A	A	3.7	A	A								29
A	A	A	A	A								30
A	A	A	A	R								31
..	3	2	1	2	3							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic foEs  
Unit : Mc  
Month : August 1960

TABLE 15  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N.  
Longitude : 77°5'E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1		6.6		4.4			3.8	9.8	11.4	11.8	11.2	11.4
2							G	7.0	11.0	11.0	12.4	13.0
3							10.7	10.3	10.7	12.1	12.6	12.2
4						3.9	6.5	8.8	11.9	11.1	12.1	12.6
5							G	10.6	10.6	11.9	11.8	12.8
6	4.3							10.8	12.0	13.0	12.0	12.0
7								9.8	12.0	C	C	C
8								6.6	10.0	12.0	B	12.2
9								4.6	12.6	11.0	12.6	12.6
10	7.0	2.7	5.0	2.2				6.2	9.0	11.8	12.2	13.0
11	3.0	4.6	2.0	3.4	4.2		G	9.0	11.4	10.7	6.8	11.2
12								G	12.4	8.7	11.6	11.6
13								9.0	9.6	11.4	12.4	12.4
14								8.4	11.2	11.0	12.2	12.2
15			6.8	6.4	2.8			7.8	10.7	11.0	11.7	11.6
16				5.4				12.4	11.4	11.6	11.6	11.0
17								8.7	12.6	8.0	11.8	16.6
18								8.8	11.0	11.0	12.4	11.6
19		10.7	10.0			4.6		12.0	10.2	10.8	12.0	12.4
20	10.7							8.4	10.3	10.6	11.5	11.7
21								8.4	10.8	11.0	12.6	12.7
22								G	G	G	11.7	11.8
23	4.0	10.6	S				2.7	10.6	11.8	11.3	12.6	12.7
24					9.0			8.6	10.8	12.3	12.4	12.8
25								G	10.6	11.4	12.4	12.5
26	5.4							10.7	10.8	11.6	12.5	12.4
27	2.8	3.0						G	10.0	11.0	12.2	13.0
28	4.0	6.0	2.0					G	G	G	10.0	11.0
29		C						6.0	9.2	11.4	12.6	9.0
30								G	8.2	10.0	13.2	10.8
31		4.2	3.6	3.6			2.8	9.0	8.0	10.8	12.0	12.2
Count	8	8	5	6	3	2	8	31	31	30	29	30
Median	4.2	5.3	3.6	4.0	..	..	2.8	8.4	10.8	11.0	12.2	12.2
Mean	4.7	5.1	3.9	4.2	..	..	5.3	8.6	10.7	11.1	11.9	12.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : August 1960

TABLE 15—(Contd.)

Ionospheric Data

75°E Mean Time

Latitude : 10°2'N.

Longitude : 77°5'E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
12.0	12.6	11.6	11.0	9.5	10.6	8.5	2.9	3.0	5.8	3.0		1
12.6	13.0	13.0	11.0	10.0	8.0	7.8	3.8					2
12.0	12.6	11.5	9.8	7.6	3.2	4.3						3
12.5	12.4	11.9	11.2	10.6	6.9							4
12.8	12.2	11.8	11.0	9.7	6.8	7.8	3.0			2.3		5
13.0	12.0	12.0	11.0	8.6	13.0	6.5	10.4					6
C	C	C	12.6	11.4	8.4	4.0						7
13.0	13.0	13.0	11.6	11.0	8.0							8
12.6	G	10.8	9.4	11.0	8.0	2.8	2.4				5.7	9
12.5	12.6	12.8	12.0	9.0	G						3.0	10
10.8	11.6	11.6	11.4	9.6	6.8				2.4	2.6	2.3	11
12.0	11.6	10.2	7.9	9.4	8.0			7.8	6.6			12
12.2	12.4	12.0	11.0	10.4	8.0				6.8			13
11.8	10.6	10.8	8.8	8.5	7.8							14
12.0	12.4	12.3	11.4	10.6	8.0							15
12.0	12.8	12.8	10.4	10.6	7.0							16
17.6	12.7	11.5	9.8	7.8								17
12.6	12.4	12.0	8.8	10.6	8.0							18
11.8	11.8	11.8	11.0	10.4	7.8	4.0				3.6	4.4	19
11.0	9.7	8.8	12.2	9.2	9.2	3.2			4.0	3.6		20
12.7	12.8	12.8	12.0s	11.2	8.3							21
11.6	11.5	12.1	11.8	9.4	7.4		4.3			3.6	3.1	22
13.0	12.6	12.8	11.4	10.6	8.6							23
12.6	12.6	12.6	12.0	10.2	7.5							24
12.5	12.2	10.6	G	G	G						2.7	25
12.4	13.0	12.8	12.0	10.4	8.0						1.9	26
12.6	13.0	12.0	11.0	9.0							3.8	27
12.8	12.0	11.0	11.0	7.0	8.0					2.6	3.8	28
17.0	8.0	10.4	6.6	9.2	7.0	4.4					5.0	29
11.0	12.0	13.0	12.0	8.6	8.8	5.0	5.6		2.7	4.2		30
11.8	12.0	12.0	10.4	9.4	7.0						5.0	31
30	30	30	31	31	29	11	7	2	6	8	11	Count
12.5	12.4	12.0	11.0	9.6	8.0	4.4	3.8	..	4.9	3.3	3.8	Median
12.6	12.1	11.8	10.8	9.7	7.9	5.3	4.6	..	4.7	3.2	3.7	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : foEs

Unit : Mc

Month : August 1960

TABLE 15—(Contd.)

Ionospheric Data

75°E Mean Time

Latitude : 10°2'N.

Longitude : 77°5'E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1				3.2			7.8	12.2	11.8	15.0	11.0	12.0
2							G	9.8	11.2	12.6	12.6	13.0
3							13.2	10.7	10.4	12.1	12.6	12.0
4					2.6	5.2	7.6	10.6	10.8	12.1	12.6	12.6
5							G	8.8	11.6	11.6	12.4	12.4
6	4.2						6.4	11.4	12.2	12.0	13.0	13.0
7							G	12.0	11.4	C	C	C
8							G	8.6	11.0	13.0	12.0	12.6
9							G	8.0	12.0	12.2	13.0	12.8
10		6.0	6.0				G	8.0	8.6	12.6	13.0	12.4
11	3.5	2.6	2.6	3.2			7.7	10.8	10.4	10.5	9.4	11.8
12	5.0	4.6	4.6				G	G	7.8	11.4	12.2	11.6
13							G	9.6	11.7	12.0	12.0	12.0
14		4.6		6.6			G	9.6	11.0	11.4	B	11.4
15			3.8		2.4		4.0	9.4	11.6	11.8	12.6	12.0
16				6.8			10.6	12.2	11.6	12.0	12.3	11.6
17								12.2	G	12.4	G	17.8
18							7.4	10.4	11.0	12.2	12.4	12.2
19	3.3						u6.6s	9.8	10.6	12.0	12.0	12.6
20	u4.8s							9.3	9.8	11.6	11.7	11.4
21		2.0					G	10.2	11.0	12.0	12.5	12.6
22							G	G	G	11.6	11.6	12.0
23		4.6					7.6	10.7	11.6	11.4	12.6	12.8
24							G	u9.1s	11.6	12.9	12.8	12.2
25							G	G	10.8	12.4	11.8	11.8
26	3.0						G	u9.0s	11.1	12.4	12.0	12.6
27	2.2	2.0					G	8.0	11.0	12.0	13.0	12.2
28	3.6	2.4					G	6.0	6.2	9.0	10.3	12.6
29			5.0				G	8.4	11.0	12.8	13.0	20.0
30								G	10.0	C	13.6	12.2
31	u7.0s	3.6					7.0	9.0	7.0	11.2	12.0	13.0
Count	9	9	5	4	2	2	26	31	31	29	29	30
Median	3.6	3.6	4.6	..	..	..	G	9.4	11.0	12.0	12.4	12.3
Mean	4.1	3.6	4.4	..	..	..	7.8	9.8	10.6	12.0	12.2	12.7

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : August 1960

TABLE 15—(Concl'd.)

Ionospheric Data

75°E Mean Time

Latitude : 10°2'N.

Longitude : 77°5'E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
12.4	11.6	11.8	9.8	9.6	11.0	S		4.5	4.4			1
14.0	13.2	12.0	11.6	9.4	9.2	6.5		2.2				2
12.4	12.0	12.1	7.6	4.1	3.7	4.3						3
12.4	12.6	11.6	11.7	8.6								4
11.6	12.0	11.8	10.8	6.8	8.5	4.8				2.1		5
										2.1		6
12.8	12.0	11.0	9.0	14.0	8.6	9.0						7
C	C	13.0	12.8	9.0	7.0	4.2						8
12.6	12.0	11.4	12.0	9.0								9
11.0	7.8	8.8	10.0	8.0		2.4				3.0	3.4	10
12.6	12.0	11.6	10.5	7.5				1.9			4.6	11
12.0	12.0	11.3	10.8	7.8	G	2.5			3.0	2.2		12
11.6	9.8	G	9.4	8.2	6.8		2.8	8.6				13
12.4	12.4	11.2	11.6	7.8	6.7			4.4	4.4			14
10.8	10.6	9.4	9.0	6.0	6.4					2.7		15
12.4	12.4	11.4	11.0	7.8	7.6							16
11.2	12.5	11.8	11.0	7.8								17
13.6	12.0	10.8	9.0	3.8	4.8						4.4	18
12.2	12.0	9.4	10.6	8.0								19
12.0	12.0	11.3	10.6	8.0	7.0	3.0			3.8		8.8	20
9.0	9.6	12.4	11.0	10.4	u6.8s				4.4			21
12.6	12.5	11.6	u12.0s	u9.4s	6.7							22
11.8	12.6	11.5	10.9	8.2			2.3		2.4	4.6	2.9	23
12.5	12.4	12.3	12.0	8.6	u7.2s							24
12.4	12.4	12.7	10.8	7.9								25
12.4	11.0	7.8	G	G	G						u8.9s	26
12.7	13.0	11.8	11.2	8.8	6.8						3.6	27
13.0	12.0	12.0	10.6	7.0	6.4						3.6	28
12.2	12.0	11.0	9.0	8.2	9.0					4.4	4.2	29
6.0	9.0	7.2	10.4	8.0			2.4					30
12.6	12.2	10.0	12.0	8.0	8.0	5.4			u8.0s	4.0		31
13.0	12.4	10.6	9.0	8.0	2.8							
30	30	31	31	31	22	9	3	5	7	8	9	Count
12.4	12.0	11.4	10.8	8.0	6.8	4.3	..	4.4	4.4	2.8	4.2	Median
12.0	11.7	11.1	10.6	8.1	7.0	4.7	..	4.3	4.3	3.1	4.9	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc

Month : August 1960

TABLE 16  
Ionospheric Data  
75° E Mean Time

Latitude : 10° 2' N.

Longitude : 77° 5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1		1.8		1.9				3.2	4.8	6.4	4.0	4.0
2							G	2.8	3.3	3.6	3.8	4.0
3							3.3	3.4	3.3	3.6	3.8	4.0
4						1.9	2.5	2.7	3.3	3.6	3.9	4.0
5							G	2.8	3.2	3.7	3.9	4.1
6	1.8						G	8.0	3.2	4.0	3.9	..
7								2.8	3.4	C	C	C
8								2.8	3.3	3.8	B	4.3
9								2.8	3.8	3.8	3.9	4.0
10	2.3		1.5	1.5				3.0	3.4	3.8	4.0	4.2
11	1.8	2.2	1.4	1.7	1.7		G	3.2	5.0	3.8	4.0	4.2
12								G	3.6	4.0	4.2	4.4
13								3.0	3.6	3.9	4.2	4.3
14								3.0	3.6	3.8	4.1	4.7
15			1.5		1.5			3.0	3.6	3.9	4.2	4.5
16				1.6				3.6	4.0	3.9	4.2	4.5
17								3.0	3.8	4.1	4.2	6.2
18								3.0	3.7	4.0	4.2	4.4
19		2.6						3.0	3.6	4.0	4.3	4.4
20	2.2							3.0	3.6	4.0	4.2	4.4
21								3.0	3.6	4.0	4.2	4.3
22								G	G	G	4.3	4.4
23							2.0	2.9	3.4	3.8	4.2	4.2
24								2.8	3.3	3.8	4.1	4.3
25								G	3.3	3.8	4.0	4.0
26	2.4							2.8	3.4	3.8	4.1	4.2
27	1.2							G	3.3	3.8	4.0	4.2
28		3.0	1.4					G	G	G	4.0	4.6
29								2.9	3.3	3.8	3.8	..
30								G	3.3	3.8	4.4	4.0
31								2.9	3.2	3.7	4.0	4.0
Count	6	4	4	4	2	1	6	31	31	30	29	28
Median	2.0	..	..	..	..	..	G	2.9	3.4	3.8	4.1	4.2
Mean	2.0	..	..	..	..	..	..	3.0	3.6	3.9	4.1	4.3

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc

Month : August 1960

TABLE 16—  
Ionospheric Data  
75° E Mean Time

Latitude : 10° 2' N.

Longitude : 77° 5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
4.0	4.0	4.0	3.7	3.2	2.8	2.6	1.4	1.5	2.2	2.0		1
4.0	4.1	3.9	3.6	3.3	3.0	2.6	2.1					2
4.0	4.0	3.7	3.6	3.3	3.1	2.2						3
4.0	4.1	3.9	3.7	3.2	2.8							4
4.2	4.1	4.0	3.6	3.4	2.9	3.1	2.0			1.7		5
4.1	4.0	3.8	3.6	3.2	6.0		2.2					6
C	C	C	3.6	3.2	2.7	2.0						7
4.4	4.2	4.0	3.7	3.4	3.0							8
4.2	G	4.0	3.8	3.2	2.8	2.2	1.7				2.5	9
4.4	4.2	4.0	3.8	3.4	G							10
4.3	4.2	4.0	3.8	3.4	2.8					1.7	1.8	11
4.4	4.2	4.1	3.8	3.6	3.0			3.2	2.5			12
4.3	4.4	4.1	3.9	3.4	2.9				1.9			13
4.4	4.4	4.3	3.9	3.4								14
4.4	4.5	4.3	4.0	3.4	3.0							15
4.7	4.6	4.6	3.9	3.6								16
5.0	4.3	4.0	4.0	3.6								17
4.5	4.4	4.2	4.0	3.4	2.9							18
4.4	4.5	4.2	4.0	3.5	3.2							19
4.5	4.4	4.2	6.2	4.0	4.4							20
4.4	4.2	4.2	3.8	3.4	2.8					1.7	1.7	21
4.3	4.2	4.0	3.8	3.4	2.9					2.4		22
4.4	4.2	4.0	3.7	3.3	2.8					1.9		23
4.3	4.1	4.0	3.7	3.2	2.7							24
4.2	4.1	3.9	G	G	G							25
4.4	4.2	4.0	3.8	3.2								26
4.2	4.2	4.0	3.8	3.4								27
4.2	4.0	4.0	3.8	3.2	2.8					1.7	2.2	28
5.5	4.0	4.0	3.6	3.2	2.7						1.7	29
4.0	4.0	4.0	4.6	3.4	3.0	2.3	2.1		2.0	1.9	1.6	30
4.2	4.0	3.8	3.6	3.2								31
											2.2	
30	30	30	31	31	25	7	6	2	5	8	7	Count
4.3	4.2	4.0	3.8	3.4	2.9	2.3	2.0	..	2.0	1.8	1.8	Median
4.3	4.2	4.0	3.9	3.3	3.1	2.4	1.9	..	2.1	1.9	2.0	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc

Month : August 1960

TABLE 16—(Contd.)

Ionospheric Data

75° E Mean Time

Latitude : 10° 2' N.

Longitude : 77° 5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1				1.5			3.1	4.0	4.6	5.4	3.9	4.0
2							G	3.0	3.4	3.7	4.0	4.1
3							4.4	3.2	3.5	3.7	3.9	4.0
4						2.0	2.5	3.1	3.4	3.7	4.0	4.0
5							G	3.0	3.5	3.7	4.0	4.2
6	2.0						2.4	3.3	3.8	3.8	4.0	4.2
7							G	3.2	3.5	C	C	C
8							G	3.0	3.7	3.9	4.4	4.4
9							G	3.1	3.6	3.8	4.0	4.0
10		2.0	2.0				G	3.2	3.6	4.0	4.2	4.2
11	1.6	1.4	1.5	1.7			2.6	3.6	3.8	3.9	4.2	4.2
12	2.0	2.4	1.8					G	3.8	4.0	4.2	4.4
13							G	3.2	3.7	4.0	4.4	4.3
14		2.2		2.0			G	3.3	3.8	4.1	B	4.6
15			1.6				3.0	3.3	3.8	3.9	4.4	4.4
16				1.8			6.0	4.0	3.8	4.1	4.4	4.6
17								3.2	G	4.2	G	5.2
18							2.7	3.2	3.8	4.4	4.3	4.6
19							2.6	3.4	3.8	4.1	4.2	4.5
20	2.2							3.3		4.1	..	4.6
21		1.8					G	3.3	3.8	4.1	4.2	4.4
22								G	G	4.0	4.3	4.4
23		1.7					2.6	3.1	3.8	3.9	4.2	4.3
24							G	3.1	3.6	4.0	4.1	4.2
25							G	G	3.6	4.0	4.1	4.1
26							G	3.1	3.6	4.0	4.1	4.2
27		1.5					G	3.0	3.6	3.8	4.2	4.3
28							G	..	..	4.0	4.0	4.8
29							G	3.1	3.5	3.8	4.2	6.4
30								G	3.5	C	4.4	4.2
31							2.7	3.2	3.6	3.8	4.0	4.2
Count	4	7	4	4	..	1	26	30	29	29	28	30
Median	..	1.8	..	..	..	..	G	3.2	3.6	4.0	4.2	4.3
Mean	..	1.8	..	..	..	..	3.1	3.2	3.7	4.0	4.2	4.4

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fbEs

Unit : Mc

Month : August 1960

TABLE 16—(Concl'd.)

Ionospheric Data

75° E Mean Time

Latitude : 10° 2' N.

Longitude : 77° 5' E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
4.0	4.0	3.8	3.4	3.0	3.2	1.8		2.2	2.2			1
4.0	4.0	3.8	3.5	3.4	3.2	2.4		2.1				2
4.0	3.9	3.7	3.5	3.7	2.7	2.2						3
4.0	4.0	3.8	3.4	3.0								4
4.2	4.1	3.8	3.5	3.1	3.7	2.6						5
4.1	4.2		3.4	6.0	2.8	3.0						6
C	C	3.8	3.4	3.0		2.4						7
4.2	4.1	4.0	3.6	3.2								8
4.2	4.0	3.8	3.6	3.1								9
4.3	4.0	3.8	3.6	3.2							2.0	10
											1.7	
4.2	4.2	3.9	3.5	3.1	G	1.5			1.5			11
4.3	4.2	G		3.3	2.6		2.0	2.4				12
4.3	4.2	3.9	3.6	3.2	2.5			1.6	2.0			13
4.5	4.2	4.1	3.7							1.8		14
4.5	4.2	4.0	3.6	3.3	2.8							15
4.4	4.5	4.2	3.6	3.3								16
4.3	4.2	4.0	3.8	3.3								17
4.4	4.4		3.8	3.2							1.8	18
4.4	4.4	4.1	3.8	3.4	2.8	2.6			2.3		2.3	19
..	4.2	5.6	4.2	4.0	3.6				2.2			20
4.3	4.2	4.0	3.6	3.1	2.4							21
4.4	4.2	4.0	3.6	3.1			1.8		1.4			22
4.3	4.2	4.0	3.5	3.1	2.3							23
4.3	4.1	3.8	3.5	3.0								24
4.3	4.0	4.0	G	G	G						3.0	25
4.2	4.2	3.9	3.5	3.0								26
4.2	4.0	3.8	3.5	3.2							1.4	27
4.1	4.0	4.0	3.5	3.0	2.6						2.1	28
4.4	4.1	3.8	3.5	2.8			2.1			1.5	1.7	29
4.2	4.0	4.2	4.4	3.0	2.7	1.8			3.2			30
4.2	3.9	3.7	3.4	3.0	2.2							31
29	30	29	30	30	17	9	3	4	7	2	8	Count
4.3	4.2	3.9	3.5	3.1	2.7	2.4	..	..	2.2	..	1.9	Median
4.3	4.1	4.0	3.6	3.3	2.8	2.3	..	..	2.1	..	2.0	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : August 1960

TABLE 17  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	1.9	1.5	1.6	1.6	1.8	1.5	2.0	1.7	2.3	2.8	2.6	2.8
2	1.7	1.7	1.5	1.2	1.2	1.4	1.5	1.6	1.6	2.2	2.6	2.6
3	1.3	1.8	1.3	1.6	1.3	1.4	1.4	1.5	1.9	2.4	2.3	2.6
4	1.7	1.5	1.3	1.4	1.7	1.4	1.8	1.5	1.9	2.2	2.7	2.5
5	1.3	1.7	1.2	1.3	1.3	1.3	1.6	1.4	1.9	2.2	2.3	2.8
6	1.4	1.3	1.7	1.2	1.5	1.4	2.0	1.6	1.8	2.4	2.5	4.6
7	1.2	1.3	1.2	1.3	1.7	1.3	2.2	1.4	1.7	C	C	C
8	1.4	1.5	1.2	1.8	1.7	1.3	2.2	1.6	2.2	2.6	6.2	3.1
9	1.0	1.2	1.2	1.2	1.2	1.2	2.2	1.8	2.4	2.4	2.6	2.7
10	1.5	1.6	1.2	1.3	1.5	1.6	2.2	1.7	2.2	2.6	2.6	2.9
11	1.6	1.2	1.2	1.0	1.4	1.5	1.7	1.7	4.2	3.0	2.9	3.1
12	2.0	2.1	2.0	1.9	2.1	2.2	2.4	2.2	2.9	3.1	3.4	3.1
13	1.4	1.6	1.4	1.4	1.2	1.3	1.1	2.1	2.5	2.9	3.0	3.3
14	1.7	1.7	1.8	1.5	1.8	1.5	2.2	2.0	2.5	2.8	3.2	4.6
15	1.6	1.3	1.5	1.3	1.5	1.7	2.2	1.7	2.2	2.7	2.9	3.6
16	1.3	1.2	1.2	1.4	1.7	1.8	2.0	2.0	2.4	3.0	2.9	3.2
17	1.4	1.6	1.6	1.7	1.8	1.7	2.2	1.8	2.3	2.4	2.8	2.8
18	1.7	1.5	1.6	1.6	1.9	1.8	2.2	2.3	2.6	2.8	3.0	3.1
19	1.8	2.1	2.0	1.8	1.5	1.4	2.2	1.9	2.3	2.6	2.8	3.2
20	1.7	2.8	2.4	2.4	1.7	1.7	2.3	2.0	2.5	3.2	3.2	3.5
21	2.1	1.9	2.0	1.5	1.5	1.6	2.2	1.8	2.4	3.2	3.0	3.0
22	2.2	1.7	2.1	1.8	1.8	1.6	2.3	2.2	2.8	3.1	3.2	3.3
23	1.5	1.5	1.7	1.9	1.6	1.6	1.6	1.6	2.2	2.5	2.7	3.0
24	1.8	1.6	1.7	1.5	1.7	1.6	2.3	1.7	2.1	2.5	2.8	3.1
25	1.4	1.1	1.1	1.1	1.3	1.3	2.0	1.6	1.9	2.5	2.8	3.0
26	1.9	2.0	1.5	1.1	1.3	1.3	2.2	1.6	2.1	2.3	2.8	3.0
27	1.1	1.6	1.5	1.6	1.5	1.6	2.2	1.7	1.7	2.6	2.6	2.8
28	1.6	1.5	E	1.5	1.4	1.7	2.0	2.3	2.1	2.8	2.6	3.2
29	1.5	C	1.6	1.5	1.5	1.7	2.0	1.9	1.9	2.5	2.4	4.6
30	2.2	1.5	1.6	1.4	1.2	1.4	2.2	1.9	2.1	2.6	2.6	2.6
31	2.4	2.3	2.1	1.5	1.3	1.4	1.7	1.6	2.0	2.5	2.6	2.6
Count	31	30	31	31	31	31	31	31	31	30	30	30
Median	1.6	1.6	1.5	1.5	1.5	1.5	2.2	1.7	2.2	2.6	2.8	3.1
Mean	1.6	1.6	1.6	1.5	1.5	1.5	2.0	1.8	2.2	2.6	2.9	3.1

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin  
Unit : Mc  
Month : August 1960

TABLE 17—Contd.  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N.  
Longitude : 77°5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
3.0	2.8	2.5	2.5	2.1	1.5	1.3	1.2	1.2	1.1	1.8	1.8	1
3.0	2.6	2.5	2.6	2.1	2.4	1.5	1.2	1.5	2.0	1.8	1.5	2
2.8	2.6	2.6	2.7	2.2	1.9	1.6	2.0	1.4	1.5	1.4	2.1	3
2.6	2.8	2.8	2.6	2.2	2.1	1.9	1.5	1.2	1.4	1.4	1.4	4
3.0	3.1	3.1	2.7	2.4	2.2	1.4	1.1	1.7	1.6	1.4	1.6	5
3.0	2.9	2.8	2.4	2.1	2.2	2.2	1.1	1.7	1.5	2.0	1.3	6
C	C	C	2.4	2.2	1.9	1.8	1.8	1.8	1.7	2.0	1.5	7
3.4	3.0	3.0	2.8	2.5	2.2	2.0	1.5	1.5	1.5	1.7	1.2	8
2.8	2.8	2.8	2.8	2.5	2.2	1.8	1.4	1.3	1.3	1.4	2.4	9
3.0	3.0	2.6	2.6	2.4	2.2	2.1	1.2	1.5	1.7	1.5	1.5	10
3.4	3.4	3.0	2.6	2.3	2.1	2.2	1.4	1.5	1.4	1.3	1.5	11
2.9	3.2	3.0	2.9	2.8	2.4	2.2	1.3	1.4	1.9	1.4	1.4	12
3.2	3.0	2.8	2.6	2.2	2.0	2.0	1.4	1.6	1.3	1.9	2.0	13
3.4	3.6	3.1	2.6	2.4	2.5	2.0	1.5	1.6	1.9	1.8	1.8	14
3.3	3.2	2.8	2.8	2.3	1.8	1.9	1.5	1.8	1.8	1.9	1.6	15
3.3	3.2	3.2	2.6	2.2	3.3	2.0	1.5	1.4	1.5	1.8	1.8	16
3.0	3.1	2.7	2.8	2.5	2.9	2.0	1.7	1.5	1.7	1.4	1.4	17
3.6	3.0	2.9	2.9	2.4	2.1	1.9	1.2	1.5	1.7	1.7	1.7	18
3.2	3.0	C	2.8	2.1	1.6	2.6	1.6	1.5	1.5	1.5	1.3	19
4.0	3.2	3.0	2.4	2.3	1.8	2.0	1.2	1.7	1.5	2.0	2.0	20
2.9	3.0	2.7	2.4	2.1	2.0	1.9	2.2	1.6	1.6	2.0	2.2	21
3.3	3.1	2.6	2.7	2.2	2.2	2.0	1.6	1.7	1.6	1.4	1.6	22
3.2	3.2	2.9	2.6	2.4	2.2	1.8	1.3	1.2	1.3	1.4	1.4	23
3.1	3.0	2.7	2.7	2.2	2.0	1.8	1.2	1.3	1.4	1.4	1.2	24
3.2	3.0	2.8	2.8	2.8	2.2	2.1	1.7	1.5	1.4	1.4	1.6	25
3.2	3.0	3.0	2.8	2.4	2.2	1.9	1.4	1.6	1.6	1.5	1.4	26
2.8	3.0	3.2	2.7	2.4	2.8	2.0	1.5	1.5	1.5	1.7	1.6	27
3.0	2.6	2.4	2.6	2.6	2.4	2.2	1.7	1.6	1.7	1.5	1.2	28
2.4	2.4	2.2	2.4	2.2	2.2	1.7	2.2	1.8	1.8	1.2	1.4	29
2.4	2.6	2.5	2.6	2.2	1.8	1.5	1.4	1.7	1.4	1.8	2.4	30
3.4	3.0	2.8	2.6	2.4	2.3	1.8	1.5	1.6	1.7	1.8	1.5	31
30	30	29	31	31	31	31	31	31	31	31	31	Count
3.0	3.0	2.8	2.6	2.3	2.2	1.9	1.5	1.5	1.5	1.5	1.5	Median
3.1	3.0	2.8	2.6	2.3	2.2	1.9	1.5	1.5	1.6	1.6	1.6	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic :  $f_{min}$   
 Unit : Mc  
 Month : August 1960

TABLE 17—(Contd.)  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10°2' N.  
 Longitude : 77°5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	1.7	1.7	1.5	1.4	1.6	1.6	1.8	1.9	2.2	2.5	2.4	2.7
2	1.6	1.7	1.2	1.2	1.3	1.5	1.3	1.6	2.3	2.3	2.7	2.8
3	2.0	1.5	1.7	1.5	1.3	1.4	1.3	1.7	2.0	2.3	2.6	2.8
4	1.5	1.5	1.7	1.5	1.4	1.5	1.6	1.6	2.2	2.2	2.5	2.5
5	1.4	1.2	1.3	1.3	1.5	1.4	1.8	1.5	2.1	2.3	2.8	3.0
6	1.5	1.6	1.5	1.5	1.6	1.4	1.6	1.4	2.5	2.5	2.8	2.8
7	1.3	1.5	1.3	1.4	1.3	1.4	1.6	1.6	2.2	C	C	C
8	1.5	1.3	1.7	1.6	1.2	1.7	1.4	1.9	2.7	2.4	4.2	3.6
9	1.0	1.1	1.2	1.3	1.1	1.4	1.6	1.7	2.2	2.4	2.6	3.0
10	1.5	1.2	1.2	1.5	1.7	1.6	1.8	2.2	2.3	2.4	2.8	3.0
11	1.3	1.4	1.6	1.4	2.3	1.7	1.7	2.4	3.0	2.8	3.0	3.1
12	1.8	1.9	1.4	2.2	1.8	2.1	2.4	2.5	2.8	2.8	3.0	3.2
13	1.7	1.5	1.3	1.4	1.4	1.3	2.1	2.2	2.7	2.9	3.6	3.2
14	1.3	1.8	1.5	1.5	1.4	1.6	2.0	2.2	2.6	2.9	B	3.7
15	1.6	1.4	1.5	1.4	1.4	2.0	2.0	2.1	2.5	2.9	4.2	3.2
16	1.4	1.1	1.3	1.8	1.8	1.6	1.9	2.2	2.6	2.8	3.1	3.3
17	1.7	1.6	1.6	1.7	1.8	2.1	3.0	1.9	2.5	2.7	3.2	3.1
18	1.6	1.5	1.9	1.8	1.6	1.5	1.6	2.3	2.8	3.4	3.0	3.6
19	2.2	2.2	2.0	1.4	1.4	1.6	1.8	2.2	2.6	2.8	3.0	3.0
20	2.2	3.0	2.2	2.0	2.1	2.1	2.8	2.2	4.0	3.2	4.6	4.0
21	2.2	1.5	1.4	1.2	1.6	1.8	1.9	2.2	2.5	3.2	3.0	3.1
22	2.3	1.6	1.9	1.7	1.8	1.7	2.8	2.6	3.0	3.1	3.3	3.4
23	1.5	1.4	1.9	1.6	1.3	1.7	1.6	2.0	2.4	2.8	3.0	3.1
24	1.7	1.4	1.8	1.6	1.9	2.0	1.7	1.8	2.2	2.6	3.2	3.1
25	1.1	1.1	1.1	1.0	1.3	1.5	1.5	1.8	2.3	2.7	3.0	3.0
26	2.1	1.5	1.3	1.4	1.1	1.4	2.5	1.8	2.2	2.6	2.8	3.1
27	1.6	1.1	1.6	1.5	1.5	1.6	1.6	1.6	2.0	2.6	3.0	3.0
28	1.5	1.4	1.4	1.6	1.6	1.8	2.3	2.0	2.4	2.8	3.0	2.8
29	1.5	1.6	1.4	1.7	1.6	1.7	1.8	1.9	2.2	2.4	3.4	2.6
30	1.7	1.8	1.4	1.5	1.3	1.8	2.4	1.9	2.2	C	2.6	2.6
31	2.2	1.8	1.7	1.3	1.5	1.5	1.7	1.9	2.2	2.4	2.6	3.2
Count	31	31	31	31	31	31	31	31	31	29	29	30
Median	1.6	1.5	1.5	1.5	1.5	1.6	1.8	1.9	2.4	2.7	3.0	3.1
Mean	1.6	1.5	1.5	1.5	1.5	1.6	1.9	2.0	2.5	2.7	3.0	3.1

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : August 1960

TABLE 17—(Contd.)

Ionospheric Data

75°E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
3.2	2.7	2.4	2.4	1.8	1.4	1.3	1.2	1.3	1.1	2.1	1.6	1
2.6	2.8	2.6	2.6	2.3	2.2	1.4	2.2	1.4	1.9	1.7	1.3	2
2.6	2.7	2.8	2.3	1.9	1.9	1.3	1.6	1.6	1.3	1.5	1.6	3
2.8	2.8	2.6	2.4	2.4	2.3	1.8	1.2	1.3	1.2	1.4	1.3	4
2.8	3.2	2.8	2.3	2.2	1.7	1.2	1.8	1.7	2.0	1.5	1.3	5
3.1	3.4	4.0	2.3	2.0	1.8	1.4	2.0	1.8	2.0	1.2	1.3	6
C	C	2.6	2.4	2.1	2.4	1.4	1.5	1.8	1.8	1.6	1.3	7
3.2	3.0	2.4	2.6	2.4	2.4	1.6	1.3	1.5	1.6	1.5	1.1	8
2.9	2.8	2.8	2.9	2.5	2.0	1.8	1.5	1.3	1.3	1.9	1.5	9
3.0	2.8	2.6	2.6	2.4	2.3	1.6	1.5	1.5	1.6	1.3	1.4	10
3.2	2.9	2.8	2.5	2.2	1.9	1.3	1.4	1.4	1.1	1.7	2.0	11
3.3	3.2	3.2	3.9	2.6	2.2	1.5	1.4	1.5	1.5	1.6	1.4	12
3.1	2.9	2.9	2.4	2.3	1.8	1.3	1.2	1.2	1.4	2.0	2.0	13
3.5	3.2	2.9	2.6	2.6	2.5	1.5	1.7	1.8	2.0	1.6	1.5	14
3.4	3.0	3.0	2.4	2.1	1.6	1.6	1.8	1.7	1.7	1.8	1.7	15
3.2	3.2	2.9	2.4	2.2	2.6	1.5	1.4	1.2	1.5	1.6	1.5	16
3.2	3.2	3.0	2.5	2.4	2.5	1.4	1.5	1.5	1.4	1.7	1.6	17
3.4	3.0	4.0	2.5	2.4	2.6	1.3	1.5	1.5	1.6	1.9	1.5	18
3.3	3.2	2.8	2.4	1.8	1.7	1.5	1.7	1.6	1.2	1.3	1.5	19
5.0	3.0	2.8	2.4	2.2	1.7	1.5	1.5	1.4	1.7	2.1	2.2	20
2.8	3.0	2.6	2.2	2.2	2.1	1.4	1.3	1.7	1.5	2.3	2.2	21
3.3	2.8	2.8	2.8	2.3	2.4	1.4	1.6	1.7	1.2	1.5	1.5	22
3.1	3.0	2.9	2.5	2.3	2.0	1.4	1.3	1.4	1.6	1.4	1.4	23
3.1	2.7	2.5	2.4	2.2	2.3	1.3	1.5	1.4	1.3	1.2	1.2	24
3.2	3.1	2.6	2.4	3.2	2.1	2.2	1.6	1.6	1.5	1.6	1.6	25
3.0	3.0	2.8	2.6	2.3	2.3	1.3	1.4	1.5	1.3	1.5	1.2	26
3.2	3.0	3.0	2.5	2.4	2.4	1.5	1.4	1.6	1.6	1.9	1.5	27
3.0	2.8	2.6	2.6	2.6	1.8	2.4	1.8	1.7	1.7	1.3	1.3	28
2.1	2.4	3.2	2.2	2.2	2.2	2.5	1.6	1.8	1.5	1.8	1.7	29
2.6	2.2	2.8	2.4	2.0	1.5	1.5	1.6	1.8	1.5	2.2	2.6	30
3.2	2.8	2.8	2.4	2.4	1.9	1.7	1.4	1.5	1.8	1.5	1.6	31
30	30	31	31	31	31	31	31	31	31	31	31	Count
3.2	3.0	2.8	2.4	2.3	2.1	1.5	1.5	1.5	1.5	1.6	1.5	Median
3.1	2.9	2.9	2.5	2.3	2.1	1.5	1.5	1.5	1.5	1.7	1.6	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F<sub>2</sub>  
 Unit : Km.  
 Month : August 1960

TABLE 18  
 Ionospheric Data  
 75°E Mean Time

Latitude 10°2' N.  
 Longitude 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	A	L	L
2								L	L	L	L	L
3								L	L	L	u350L	L
4							L	L	L	L	L	L
5								L	L	L	u340L	L
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
31								L	L	L	L	L
Count							..	..	..	..	2	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1'0 Mc. to 25'0 Mc. in 27 seconds.

471

Characteristic : h'F<sub>2</sub>

Unit : Km

Month : August 1960

TABLE 18

Ionospheric Data

75°E Mean Time

Latitude 10°2' N.

Longitude 77°5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	L	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
L	L	L	L	L	L							5
L	L	L	L	L	L							6
L	L	L	L	L	L							7
L	L	L	L	L	L							8
L	L	L	L	L	L							9
L	L	L	L	L	L							10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L <sub>LH</sub>	L <sub>LH</sub>	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
L	L	L	L	L	L							21
L	L <sub>LH</sub>	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
L	L	L	L	L	L							31
..	..	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

471

Characteristic : h'F<sub>2</sub>

Unit : Km

Month : August 1960

TABLE 18—(Contd.)

Ionospheric Data

75 E Mean Time

Latitude 10°2' N

Longitude 77°5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0840	0930	1030	1130
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4							L	L	L	L	L	L
5								L	L	L	L	L
6								L	L	L	L	L
7								L	L	C	C	C
8							L	L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14							L	L	L	L	L	L
15								L	L	L	L	L
16							A	L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24							L	L	L	L	L	L
25								L	L	L	L	L
26								L	L	L	L	L
27							L	L	L	L	L	L
28							L	L	L	L	L	L
29								L	L	C	L	L
30								L	L	L	L	L
31							L	L	L	L	L	L
Count							..	..	..	..	..	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1°0 Mc. to 25°0 Mc. in 27 seconds.

Characteristic : h'F<sub>2</sub>

Unit : Km.

Month : August 1960

TABLE 18—(Concl'd.)

Ionospheric Data

75°E Mean Time

Latitude 10°2' N.

Longitude 77°5' E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L	L							3
L	L	L	L	L								4
L	L	L <sup>340</sup>	L	L								5
L	L											6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L	L							11
L	L	L	L	L								12
L	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	L	L	L								16
L	L <sup>LH</sup>	L <sup>LH</sup>	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L								26
L	L	L	L	L								27
L	L	L	L	L								28
L	L	L	L	L								29
L	L	L	L	L								30
L	L	L	L	L								31
..	..	1	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1°0 Mc. to 25°0 Mc. in 27 seconds.

Characteristic : h'F  
Unit : Km.  
Month : August 1960

TABLE 19  
Ionospheric Data  
75°E Mean Time

Latitude 10.2°N.  
Longitude 77.5°E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	245	255	240	250	235	245	255	235	A	A	215	205
2	260	260	260	250	240	240	275	240	230	220	200	200
3	235	250	245	250	240	240	u280A	u260A	230	220	220	210
4	260	235	250	265	260	275	265	240	230	220	210	205
5	250	245	230	225	230	240	270	240	220	200	205	200
6	270	260	260	240	220	220	260	240	210	220	200	B
7	240	240	220	220	220	230	260	240	225	C	C	C
8	280	280	280	260	240	240	260	240	230	220	B	200
9	360	400	u460F	440F	300	240	270	240	240	240	210	205
10	300	340	380	340	260	260	250	230	220	215	200	205
11	300	340	380	380	330	245	265	u245A	B	220	200	200
12	235	240	260	265	250	235	250	240	230	220	205H	215
13	225	225	255	270	290	310	275	240	225	220	210	215
14	265	240	250	240	240	225	275	245	225	210	210	u225B
15	265	280	265	320	375	300	270	240	225	215	215	200
16	230	220	240	240	230	225	260	u240A	235	210	205	200
17	u420F	u410F	u380F	F	F	u360F	245	245	240	230	225	A
18	380	410	420	365	300	300	270	245	230	220	220	220
19	285	260	240	235	220	210	265	245	225	220	215	210
20	310	250	260	270	295	260	275	245	230	220	215	200
21	280	290	300	260	235	205	265	250	230H	230	215	215
22	290	u280F	u300F	265	225	225	260	250	240	225	215	215
23	250	255	270	260	220	205	250	240	205	220	215	200
24	260	250	260	245	215	220	265	220M	220	205	195	190
25	u270F	255	245	230	210	205	250	235	205H	200	200	180H
26	275	260	255	260	240	205	260	240	220	200H	195H	195H
27	275	260	260	255	230	210	240	235	210	200	200	190
28	280	A	280	240	260	240	250	230	220	220	220	A
29	320	C	260	245	250	240	260	240	230	220	210	B
30	290	310	320	370	340	300	260	250	235	230	A	230
31	240	230	240	250	240	245	270	250	225	215	210	210
Count	31	29	31	30	30	31	31	31	29	29	28	26
Median	270	260	260	260	240	240	260	240	225	220	210	205
Mean	280	275	285	275	255	245	260	240	225	215	210	205

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km.

Month : August 1960

TABLE 19—(Contd.)

Ionospheric Data

75°E Mean Time

Latitude 10°2'N

Longitude 77°5'E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
200	195H	200	210H	215	245	270	315	365	335	305	280	1
200	200	205	210	235	260	280	340	320	280	300	280	2
210	205	210	220	230	260	280	315	F	340	320	300	3
200	200	200	210	225	240	280	320	350	320F	280	265	4
200	205	200	220	225	240	280	320	F	U360F	350	300	5
200	220	210	220	220	A	260	295	300	295	300	270	6
C	C	C	200	200	240	280	305	310	300	300	280	7
220	210	205	205	230	260	275	320	380	320F	340	350	8
200	200	200	200	225	260	270	265	250	240	260	265	9
200	220	200	220	220	260	300	410	440	420	340	300	10
200H	210	205	210	235	255	280	325	375	380	U385F	300	11
210	215	210	220	240	260	285	U330F	U310F	270	240	240	12
215	215	210	210	225	255	290	395	F	F	285	310	13
210	215	210	200	220	245	280	360F	U400F	350F	U300F	275	14
205	210	200H	215	225	250	280	400	F	U425F	F	U320F	15
210	215	210H	205	215	255	280	400	U290F	F	U385F	U380F	16
A	205	210	220	240	255	285	335	325	340	350	F	17
210	220	220	225	235	260	285	F	F	F	U325F	305	18
210	215	220	220	230	260	295	395	F	F	300	340	19
U200H	220	220	A	260	280	300	340	F	300	300	295	20
220	210	220	220	225	260	300	400	F	F	U285F	320	21
205	205	205	220	225	250	290	395	F	360	F	240	22
205	215	215	220	225	255	285	350	U385F	340	285	280	23
200	215	205	220	225	245	280	360	F	F	F	U280F	24
200	200	200H	215	230	245	275	325	F	F	260	275	25
U200G	200	205	220	225	250	280	340	F	F	F	F	26
200	200	200	210	220	240	280	350	360F	340F	320F	260F	27
220	220	220	240	240	265	280	310	330	300F	320	340	28
A	A	230	240	250	260	280	300	290	280	280	280	29
225	230	230	A	255	270	280	340	330	310	280	260	30
220	220	220	220	240	260	280	330	340	280F	260	250	31
28	29	30	29	31	30	31	30	19	23	27	29	Count
205	210	210	220	225	255	280	340	330	320	300	280	Median
205	210	210	215	230	255	280	345	340	325	305	290	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 Seconds.



Characteristic : h'F

Unit : Km.

Month : August 1960

TABLE 19—(Contd.)

Ionospheric Data

75°E Mean Time

Latitude 10°2'N.

Longitude 77°5'E'

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	240	245	245	245	240	280	U260A	240	215	A	205	210
2	260	260	260	240	240	265	260	240	220	210	205	200
3	235	250	250	240	235	280	U285A	245	220	220	210	210
4	240	240	260	260	260	290	250	230	220	210	205	200
5	240	240	230	230	230	265	260	230	220	200	200	200
6	260	260	260	220	220	260	245	240	230	200	200	200
7	240	240	230	240	220	265	245	220	215	C	C	C
8	280	280	265	260	240	260	250	220	220	210	U200B	220
9	360	440	480F	365	240	250	250	235	240	220	210	205
10	320	380	380	300	230	280	240	230	220	210	200	200
11	310	355	380	360	295	260	255	240	230	215	200H	200H
12	235	255	260	260	240	240	250	230	225	210H	210	210
13	220	245	275	285	300	320	255	230	220	220	215	210
14	245	240	240	250	235	240	250	230	220	205	B	215
15	270	280	290	355	345	275	255	230	215	205	210	200
16	225	240	240	240	230	245	A	U240A	220	205	200	205
17	U425F	U380F	U445F	F	F	260	245	U230A	225	230	225	A
18	380	430	400	340	280	330	260	240	220	220	215	220
19	275	245	230	225	220	235	250	240	220	220	210	200
20	295	240	250	280	285	260	260	240	U230B	220	U215B	U220B
21	280	300	280	260	210	240	260	240	220	220H	220	210
22	285	295	U315F	250	220	240	260	245	235	220	210	210
23	260	260	270	240	215	245	255	225	200H	195	200	220
24	255	250	260	230	220	240	245	U220H	210	205	190	200
25	U270F	240	245	220	210	240	245	210H	200H	195H	190	195H
26	260	250	260	250	220	235	245	230	210H	200H	200H	190H
27	270	260	260	240	220	220	240	220	205	200	200	210
28	280	280	260	260	240	230	240	230	220	220	225	A
29	300	270	260	255	240	220	260	240	220	220	210	A
30	310	320	340	370	340	280	260	250	230	C	U240A	230
31	250	230	240	240	260	260	255	240	225	220	205	210
Count	31	31	31	30	30	31	30	31	31	28	29	27
Median	270	260	260	250	240	260	250	230	220	210	205	210
Mean	275	280	285	265	240	260	255	235	220	210	210	205

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km.

Month : August 1960

TABLE 19—(Concl'd.)

Ionospheric Data

75°E Mean Time

Latitude 10°2'N.

Longitude 77°5'E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
200	200	205	215	235	A	280	345	370	305	300	275	1
200	200	200	220	240	280	310	340	260	300	295	260	2
210	210	215	225	260	260	290	335	u340F	340	310	280	3
210	210	205	210	240	260	300	345	u320F	305F	270	250	4
205	200	215	200	230	u280A	280	F	F	360	320	280	5
210	200	B	220	A	260	280	300	295	300	280	260	6
C	C	200	200	240	270	295	320	320	300	280	280	7
220	210	220	200	240	260	300	365	360F	340F	350	360	8
200	200	200	200	240	260	280	260	240	245	260	260	9
200	210	200	220	240	270	330	460F	400	380	305	290	10
210	205	200H	220	235	265	300	350	370	u380F	345	265	11
205	215	210	u235B	245	270	305	F	280F	255	240	235	12
215	205	215	225	235	270	320	420	F	F	F	315	13
210	205	205	215	235	265	305	F	375F	F	295	260	14
205	205	200	215	240	270	330	F	F	u370F	u370F	260	15
205	215	210	205	235	270	320	F	F	F	u400F	u380F	16
215H	200	210	230	250	275	315	335	320	345	360F	u360F	17
220	220	220	225	250	275	330	F	F	F	F	300	18
215	220	225	230	240	280	340	F	F	F	F	325	19
B	215	A	A	280	285	325	u330F	290	300	290	290	20
220	220	220	220H	240	270	340	F	F	F	325	305	21
205	200	210	220	230	265	325	F	u380F	u285F	u245F	260	22
205	220	215	220	230	265	315	380	355	F	280	260	23
200	205	200	220	240	260	320	365	F	F	F	u280F	24
205	195H	200	230	240	260	300	F	F	F	u300F	u280A	25
200	200H	205H	220	235	260	300	F	F	u280F	F	280F	26
200	200	210	210	240	260	300	360	360F	280F	300F	260	27
215	220	240	240	255	280	300	340	320	300F	320	340	28
A	225	240	240	250	280	300	300	280	280	280	280	29
220	230	240	A	260	280	315	340	320	315	270	255	30
220	220	220	240	245	270	320	350	300	280	250	240	31
28	30	29	29	30	30	31	20	21	22	26	31	Count
210	210	210	220	240	270	305	345	320	300	300	280	Median
210	210	210	220	240	270	310	345	325	310	300	285	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km.

Month : August 1960

TABLE 20  
Ionospheric Data

75°E Mean Time

Latitude 10° 2' N

Longitude 77° 5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								A	A	A	A	A
2							140	A	A	A	A	A
3								A	A	A	A	A
4								A	A	A	A	A
5							125	115	A	A	A	A
6								A	A	A	A	B
7								A	A	C	C	C
8								120	120	110	B	120
9								120	105	A	A	A
10								110	A	A	A	A
11							130	A	B	A	115	A
12								110	120	A	A	A
13								A	115	A	A	A
14								115	A	A	A	B
15								A	A	A	A	A
16								A	A	A	A	A
17								110	A	A	A	A
18								120	110	110	110	A
19								120	120	115	A	A
20								A	120	A	A	A
21								115	120	120	115	110
22								120	120	120	A	A
23								A	A	A	A	A
24								A	A	A	A	A
25								110	105	110	115	110
26								110	105	A	A	A
27								110	A	A	A	A
28								130	105	120	A	120
29								120	110	A	110	B
30								120	A	A	A	A
31								A	A	120	A	A
Count							3	17	13	8	5	4
Median							..	115	115	120	115	..
Mean							..	115	115	115	115	..

Sweep 1.0 Mc. to Mc. in 27 seconds.

Characteristic : h'E  
Unit : Km.  
Month : August 1960

TABLE 20  
Ionospheric Data  
75°E Mean Time

Latitude 10° 2' N.  
Longitude 77° 5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	115	A	A						1
A	120	120	120	115	A							2
A	A	A	A	A	A							3
A	A	A	A	A	120							4
A	A	A	A	A	A							5
A	A	A	A	A	A							6
C	C	C	120	120	120							7
A	A	120	A	A	A							8
A	110	A	120	115	120							9
A	A	A	110	120	120							10
A	A	A	A	A	120							11
A	A	A	120	A	120							12
A	A	A	A	110	120							13
A	A	A	A	A	120							14
A	A	A	A	A	A							15
A	A	A	A	A								16
A	A	115	120	A								17
A	A	120	R	A	A							18
A	A	120	120	110	110							19
B	120	120	A	A	105							20
A	A	A	115	115	120							21
A	A	A	A	A	A							22
A	A	A	A	A	A							23
A	A	A	A	A	A							24
A	A	115	115	120	130							25
A	115A	A	120	115	120							26
A	A	A	110	110								27
A	A	105	A	A	A							28
A	110	110	130	120								29
110	120	110	A	A	A							30
A	A	A	120	120	130							31
1	6	10	13	13	14	..						Count
..	120	120	120	115	120	..						Median
..	115	115	120	115	120	..						Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E  
Unit : Km.  
Month : August 1960

TABLE 20—Contd.  
Ionospheric Data  
75°E Mean Time

Latitude 10°2' N.  
Longitude 77°5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							A	A	A	A	A	A
2							130	A	A	A	A	A
3								A	A	A	A	A
4								A	A	A	A	A
5							120	110	A	A	A	A
6							A	A	120	A	A	A
7							120	A	A	C	C	A
8							120	120	120	120	B	120
9							120	105	A	A	A	A
10							120	A	A	A	A	A
11							A	A	A	110	110	A
12								115	115	A	A	A
13							110	115	115	A	A	A
14							120	110	A	A	B	A
15								A	A	A	B	A
16							A	A	A	A	A	A
17								105	105	A	115	A
18							120	115	110	A	A	A
19							120	120	115	110	115	115
20								120	B	A	B	B
21							120	120	110	115	120	A
22								120	120	110	A	A
23							A	A	A	A	A	A
24							120	A	A	A	A	A
25							115	105	110	110	A	115
26							120	110	A	A	A	A
27							115	A	A	A	A	A
28							140	110	110	A	A	A
29							120	120	A	A	120	A
30								120	A	C	A	110
31							A	A	115	120	120	A
Count							17	17	12	7	6	4
Median							120	115	115	110	120	..
Mean							120	115	115	115	115	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E  
Unit : Km.  
Month : August 1960

TABLE 20—Contd.  
Ionospheric Data  
75°E Mean Time

Latitude 10°2' N.  
Longitude 77°5' E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	A	110	110	A							1
120	A	120	120	A								2
A	A	A	A	A	A							3
A	A	A	A	A								4
A	A	A	A	120	A							5
A	A	B	A	A								6
C	C	120	120	120								7
A	A	120	120	120								8
A	A	120	120	120	140							9
A	A	110	120	120								10
A	A	A	A	115	135							11
A	A	120	B	120	A							12
A	A	A	110	115	120							13
A	115	A	A	120								14
A	A	A	A	A	A							15
A	A	A	A	A								16
A	115A	115	A	A								17
120	120	B	120	120								18
A	A	120	115	105	110							19
B	120	A	A	A								20
A	A	110	110	120								21
A	A	A	A	A								22
A	A	A	A	A								23
A	A	A	A	A								24
A	120	115	110	B	130							25
120A	A	120	120	120								26
A	A	A	115	120								27
A	A	A	A	A								28
A	110	130	120	A								29
A	110	A	A	A								30
A	A	A	120	120								31
3	7	12	15	16	5							Count
..	115	120	120	120	130							Median
..	115	120	115	120	125							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es  
Unit : Km.  
Month : August 1960.

TABLE 21  
Ionospheric Data  
75° E Mean Time

Latitude 10° 2' N.  
Longitude 77° 5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1		110		105			120	100	100	100	100	100
2							G	110	100	100	100	100
3							120	110	100	100	100	100
4						110	115	120	105	100	100	100
5							G	110	100	100	100	100
6	120							100	100	100	100	100
7								100	100	C	C	C
8								120	100	100	B	100
9								120	100	100	100	100
10	120	110	110	110				100	105	100	100	100
11	120	120	120	115	110		G	105	100	100	100	100
12								G	100	100	100	100
13								105	105	100	100	100
14								100	100	100	100	100
15			115	140	120			100	100	100	100	100
16				110				100	100	100	100	100
17								100	100	100	100	100
18								100	100	100	100	100
19		120				110		105	100	100	100	100
20	120							105	100	100	100	100
21								110	100	100	100	100
22								G	G	G	100	100
23	140	120	125				130	100	100	100	100	100
24					140			100	100	100	100	100
25								G	100	100	100	100
26	115							100	100	100	100	100
27	130	140						G	100	100	100	100
28	130	100	100					G	G	G	100	105
29								100	105	105	100	110
30								G	105	100	110	100
31		120	120	120			160	110	105	100	100	100
Count	8	8	6	6	3	2	5	25	29	28	29	30
Median	120	120	120	110	..	..	120	100	100	100	100	100
Mean	125	115	115	115	..	..	130	105	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E<sub>s</sub>

Unit : Km.

Month : August 1960

TABLE 21  
Ionospheric Data  
75° E Mean Time

Latitude : 10° 2' N.

Longitude : 77° 5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
100	100	100	100	105	105	100	105	105	100	100		1
100	100	100	100	105	100	100	100					2
100	100	100	100	100	100	100						3
100	100	100	100	100	115							4
100	100	100	100	100	100	100	100			130		5
100	100	100	100	100	100	100	100					6
C	C	C	100	100	115	100						7
100	100	100	100	100	110							8
100	G	100	105	100	105	140	130				120	9
100	100	100	100	105	G						120	10
100	100	100	100	100	110				130	125	120	11
100	100	100	100	100	110			115	105			12
100	100	100	100	100	110				110			13
100	100	100	100	100	100							14
100	100	100	100	100	100							15
100	100	100	100	100	100							16
100	100	100	100	100	100							17
100	100	100	105	105	120							18
100	100	100	100	105	100	180				135	120	19
100	100	100	100	100	100	140			130	F		20
100	100	100	100	100	120							21
100	100	100	100	100	100		170			125	175	22
100	100	100	100	100	115							23
100	100	100	100	100	100							24
100	100	100	G	G	G						120	25
100	100	100	100	100	105						140	26
100	100	100	100	100	100						120	27
100	100	100	105	105	110					140	130	28
100	100	100	105	110	120	130					130	29
100	100	100	105	100	100	100	105		145	140		30
100	100	100	105	105	110						120	31
30	29	30	30	30	27	11	7	2	6	7	11	Count
100	100	100	100	100	105	100	105	..	120	130	120	Median
100	100	100	100	100	105	115	115	..	120	130	130	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : h'Es

Unit : Km.

Month : August 1960

TABLE 21—Contd.

Ionospheric Data

75° E Mean Time

Latitude : 10° 2' N.

Longitude : 77° 5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1				110			105	100	100	100	100	100
2							G	110	100	100	100	100
3						120	115	100	100	100	100	100
4					115	110	120	120	100	100	100	100
5							G	100	100	100	100	100
6	115						105	100	100	100	100	100
7							G	100	100	C	C	C
8							G	105	100	100	100	100
9							G	100	100	100	100	100
10		110	110				G	110	100	100	100	100
11	120	125	120	115			105	100	100	100	100	100
12	115	115	110				G	100	100	100	100	100
13							G	105	100	100	100	100
14		100		110			G	100	100	100	B	100
15			125		115		115	100	100	100	100	100
16				110			100	100	100	100	100	100
17								100	G	100	G	100
18							110	100	100	100	100	100
19	120						120	100	100	100	100	100
20	120							105	100	100	100	100
21		100					G	105	100	100	100	100
22								G	G	100	100	100
23		120					115	100	100	100	100	100
24							G	100	100	100	100	100
25							G	G	100	100	100	100
26	110						G	100	100	100	100	100
27	110	110					G	100	100	100	100	100
28	125	120					G	140	130	100	100	100
29			160				G	110	105	100	100	100
30								G	100	C	110	100
31	120	120					110	110	100	100	100	100
Count	9	9	5	4	2	2	11	27	29	29	28	30
Median	120	115	120	..	..	..	110	100	100	100	100	100
Mean	115	115	125	..	..	..	110	105	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km.

Month : August 1960

TABLE 21—Contd.

Ionospheric Data

75° E Mean Time

Latitude 10 : 2° N.

Longitude 77 : 5° E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
100	100	100	105	105	100	100		100	100			1
100	100	100	105	110	100	100		100				2
100	100	100	100	100	100	100						3
100	100	100	100	115								4
100	100	100	100	110	100	100				130		5
										130		
100	100	100	100	100	100	100						6
C	C	100	100	115	115	100						7
100	100	100	100	100								8
100	100	105	105	105		140				120	120	9
100	100	100	105	110				120			120	10
100	100	100	100	100	G	100			125	120		11
100	100	G	100	105	120		140	110				12
100	100	100	100	105	110			115	115			13
100	100	100	100	100	105					100		14
100	100	100	100	100	100							15
100	100	100	100	100	100							16
100	100	100	100	100	100	100					120	17
100	100	110	100	120								18
100	100	100	100	100	100	170			120		120	19
100	100	100	100	100	105				120			20
100	100	100	100	100	120							21
100	100	100	100	100	100		170		130	140	160	22
100	100	100	100	110	120							23
100	100	100	100	100								24
100	100	100	G	G	G						115	25
100	100	100	100	105	110						135	26
100	100	100	100	100	140						120	27
100	100	105	110	110	105					140	125	28
100	100	105	110	110			100					29
100	100	110	100	100	105	105			130	120		30
100	100	105	100	105	140							31
30	30	30	30	30	20	10	3	5	7	8	9	Count
100	100	100	100	100	105	100	..	110	120	125	120	Median
100	100	100	100	105	110	110	..	110	120	120	125	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic (M3000) F<sub>2</sub>

TABLE 22

Latitude : 10°2'N

Unit : —

Ionospheric Data

Longitude : 77°5'E

Month : August 1960

75° E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	3.00	2.95	3.00	3.00	3.35	3.30	3.10	3.05	2.75	2.55	2.45	2.30
2	3.00	3.00	2.90	3.15	3.25	3.30	3.00	2.95	2.60	2.30	2.50	2.45
3	3.10	3.00	3.05	2.90	3.25	3.20	2.85	2.80	2.50	2.45	2.30	2.40
4	3.10	3.30	3.20	2.95	3.10	3.10	2.95	2.90	2.65	2.30	2.30	2.40
5	3.10	3.15	3.25	3.30	3.40	3.40	3.10	3.00	2.70	2.30	2.40	2.40
6	2.95	3.05	3.10	3.25	3.40	3.50	3.10	3.00	2.60	2.50	2.50	2.30
7	3.15	3.15	3.30	3.40	3.45	3.40	3.00	3.00	2.70	C	C	C
8	2.90	2.90	3.00	3.15	3.30	3.30	3.15	2.90	2.80	2.40	2.40	2.30
9	2.50	u2.50s	F	F	F	3.20	3.15	3.10	2.80	2.50	2.10	2.40
10	2.90	j2.50RH	2.45	2.75	3.25	j3.50R	3.20	3.20	3.05	2.70	2.40	2.00
11	2.70	2.65	2.45F	F	2.55F	3.05	3.00	FS	2.65	2.40	2.40	2.35
12	3.20	3.00	2.90	2.85	2.90	3.15	3.20	3.25	2.95	2.65	2.30	2.15
13	3.25	3.20	3.10	3.00	2.85	2.65	2.85	2.85	2.50	2.30	2.20	2.20
14	j2.70F	3.05	2.90	3.00	3.00	3.25	3.05	2.75	2.40	2.25	2.20	2.35
15	2.75	2.80	2.85	2.60	2.30H	2.70	2.95	2.60	2.55	2.25	2.20	2.15
16	FS	2.90	2.95F	F	3.00	3.15	3.00	2.95	2.60	2.30	2.10	2.15
17	F	F	F	F	F	F	3.20	3.05	2.75	2.30H	2.40H	2.30
18	2.35	2.20	2.25	2.40	2.55	2.50	2.80	2.95	2.60	2.30	2.40	2.20
19	u2.80Fs	F	F	F	3.40	3.50	3.00	2.85	2.60	2.40	2.25	2.15
20	F	F	F	2.85	F	F	3.15	2.95	2.70	2.50	2.30	u2.05R
21	u2.90s	2.75	2.70	2.85	3.25	3.40	3.10	2.90	2.50	2.10	2.35	2.25
22	F	F	u2.75F	FS	3.20	3.35	3.00	3.05	u3.10F	2.75	2.50	2.30
23	2.90	2.80	2.90	3.05	3.25	3.30	3.10	2.85	2.55	2.35	2.25	2.20
24	3.00	3.00	2.95	3.10	3.30	3.25	3.05	2.95	2.55	2.25	2.35	2.20
25	F	u2.95F	3.05	F	F	F	3.20	3.30	2.90	2.50	2.25	2.35
26	F	F	F	3.10	3.40	3.65	3.20	3.10	2.80	2.40	2.40	2.35
27	2.85	F	3.05	F	F	3.50	3.50	3.25	2.95	2.50	2.25	2.25
28	F	F	F	3.10F	3.00F	F	3.30	3.30	3.00	2.75	2.55	2.30
29	2.60	C	2.90	2.95	3.00	3.25	3.10	3.00	2.65	2.25	2.15	2.50
30	2.70	u2.70s	u2.60s	2.45	2.60	2.65	3.00	3.00	2.85	2.50	2.35	2.40
31	u3.20s	u3.30s	u3.20s	3.10	3.10	3.30	3.00	3.00	2.75	2.45	2.35	2.40
Count	24	23	25	23	26	27	31	30	31	30	30	30
Median	2.90	2.95	2.95	3.00	3.20	3.30	3.10	3.00	2.70	2.40	2.35	2.30
Mean	2.90	2.90	2.90	2.95	3.10	3.20	3.10	3.00	2.70	2.45	2.35	2.30

Sweep 1.0 Mc. to 25.0 Mc, in 27 seconds,

Characteristic (M3000) F2

Unit : —

Month : August 1960

TABLE 22

Ionospheric Data

75° E Mean Time

Latitude : 10° 2' N.

Longitude : 77° 5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
2.20	2.20	2.20	2.15	2.25	2.40	2.50	2.45	2.35	2.40	2.50	2.70	1
2.30	2.15	2.25	2.30	2.30	2.35	2.35	u2.45s	F	2.50	2.55	u2.85s	2
2.30	2.25	2.35	2.40	2.50	2.60	2.65	2.55	2.50	2.55	2.65	2.80	3
2.35	2.30	2.30	2.25	2.40	2.50	2.60	2.50	2.50	2.55	2.70	2.90	4
2.40	2.30	2.40	2.45	2.50	2.55	2.65	2.60	u2.55F	u2.60F	2.65	2.70	5
2.40	2.35	2.35	2.40	2.55	2.65	2.85	2.75	2.80	2.70	2.75	2.90	6
C	C	C	2.30	2.25	2.40	2.50	2.60	2.55	2.55	2.70	2.70	7
2.25	2.35	2.40	2.30	2.40	2.40	2.60	2.55	2.35	2.50	2.50	2.50	8
2.45	2.50	2.50	2.55	2.55	2.55	2.60	2.60	3.00	3.10	3.00	3.00	9
2.25	2.20	2.20	2.30	2.35	2.45	2.50	2.25	F	F	F	u2.60F	10
2.25	2.20	2.20	2.15	2.10	2.25	2.40	2.40	2.35	2.35	F	F	11
2.25	2.20	2.20	2.35	2.30	2.35	2.25	2.20	2.40	2.65	2.80	3.00	12
2.20	2.15	2.10	2.20	2.15	2.20	2.10	2.10	F	F	F	F	13
2.30	2.20	2.25	2.20	2.35	2.35	2.30	2.20	u2.10F	u2.25F	F	2.70	14
2.10	2.10	2.10	2.15	2.20	2.20	2.20	2.10	F	F	F	F	15
2.15	2.20	2.10	2.10	2.15	2.20	2.15	2.05	F	F	F	F	16
2.30	2.00	WH	2.25	2.35	2.40	2.45	2.35	2.40	2.45	2.40	2.45	17
2.25	2.25	2.20	2.15	2.15	2.15	2.15	u2.15s	F	F	u2.40F	2.50	18
2.15	2.15	2.20	2.25	2.30	2.25	2.25	2.10	2.10	F	F	F	19
2.15	2.30	2.45	2.45	2.40	2.45	2.35	2.20	2.40	2.50	2.70	2.85	20
2.10	2.15	2.05	2.15	2.20	2.10	2.20	2.10	F	F	u2.50F	F	21
2.05	2.10	2.05	2.10	2.20	2.20	2.25	2.10	F	F	2.50	F	22
2.10	2.15	2.15	2.15	2.20	2.20	u2.20s	u2.20F	F	F	2.55	2.70	23
2.25	2.25	2.25	2.30	2.25	2.35	2.35	2.25	F	F	F	2.70F	24
2.35	2.35	2.35	2.45	2.55	2.75	2.75	2.30	u2.60s	FS	FS	2.90	25
2.35	2.35	2.30	2.30	2.35	2.45	2.45	u2.35s	u2.25F	F	F	F	26
2.35	2.30	2.30	2.35	2.40	2.55	2.55	2.40	F	F	F	F	27
u2.15RH	2.20	2.30	2.30	u2.35R	2.40	2.40	u2.45s	2.45	2.50	2.55	2.50	28
2.75	2.60	2.50	2.45	2.40	2.25	2.15	2.20	S	2.50	2.60	2.70	29
2.35	2.30	2.30	2.35	2.40	2.40	2.40	u2.40s	2.35	2.50	u2.65R	2.90	30
2.35	2.35	2.30	2.40	2.45	2.50	2.35	2.30	2.40	2.50	2.70	3.00	31
30	30	30	31	31	31	31	31	19	18	20	22	Count
2.25	2.20	2.25	2.30	2.35	2.40	2.40	2.30	2.40	2.50	2.60	2.70	Median
2.25	2.25	2.25	2.30	2.35	2.40	2.40	2.35	2.45	2.55	2.60	2.75	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic (M<sub>3000</sub>) F<sub>2</sub>

Unit : —

Month : August 1960

TABLE 22—Contd.

Ionospheric Data

75° E Mean Time

Latitude : 10° 2' N.

Longitude : 77° 5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	3.00	2.85	3.00	3.15	3.40	2.80	3.10	2.90	2.65	2.35	2.40	2.20
2	3.05	3.00	3.00	3.20	3.30	3.15	3.00	2.80	2.40	2.40	2.40	2.35
3	2.95	3.00	u2.90s	3.05	3.20	2.95	2.90	2.65	2.40	2.30	2.40	2.40
4	u3.20s	3.10	3.10	3.10	3.15	3.10	2.85	2.75	2.55	2.30	2.30	2.40
5	3.15	3.15	3.30	3.30	3.40	3.00H	3.15	2.90	2.60	2.35	2.40	2.40
6	2.95	3.10	3.20	3.30	3.50	3.00	3.00	2.80	2.50	2.40	2.40	2.15
7	3.15	3.25	3.40	3.40	3.50	4.10	3.00	2.80	2.60	C	C	C
8	2.95	2.90	u3.10s	3.20	3.30	3.20	3.00	3.00	2.60	2.30	2.40	2.30
9	u2.50s	u2.40F	F	F	F	2.95	3.10	3.00	2.65	2.30	2.30	2.40
10	2.60	j2.50RH	2.60	2.80	3.30	u2.80R	3.30	3.10	2.90	2.55	2.20	2.15
11	2.75	u2.55F	F	F	2.75	3.00	2.90	u2.85F	2.55	2.25	2.40	2.25
12	3.10	2.90	2.85	2.85	2.95	3.00	3.30	3.10	2.90	2.45	2.15	2.25
13	3.20	3.20	2.95	2.95	2.80	2.55	2.90	2.65	2.30	2.35	2.20	2.20
14	u2.80F	3.00	2.90	3.05	3.20	3.15	2.85	2.65	2.20	2.30	B	2.30
15	u2.75F	2.80	2.65	2.35H	2.25H	2.85	2.80	2.55	2.35	2.20	2.15	2.15
16	F	2.90	2.90	3.00	3.00	3.00	2.95	2.80	2.50	2.10	2.15	2.15
17	F	F	F	F	F	F	3.20	2.95	2.65	2.55H	2.25	2.35
18	2.35	2.15	2.35	2.50	2.55	2.40	2.90	2.65	2.40	2.35	2.30	2.25
19	F	F	F	u3.20s	3.45	2.95	3.00	2.80	2.40	2.30	2.25	2.15
20	F	C	u2.90C	F	F	3.25	3.05	2.80	2.60	2.50	u2.20R	2.05
21	2.80	2.65	2.70	3.05	3.50	2.85	2.95	2.75	2.25	2.30	2.35	2.20
22	F	F	2.80	3.10	3.10	3.20	3.15	3.15	2.90	2.65	2.40	2.15
23	2.90	2.80	2.90	3.00	3.45	3.25	2.95	2.70	2.45	2.20	2.30	2.15
24	3.05	3.00	3.00	3.20	3.45	2.85	3.00	2.75	2.25	2.40	2.30	2.25
25	F	2.95	u3.15F	3.35	F	3.15	3.30	3.10	2.70	2.30	2.35	2.35
26	3.05	F	u2.90F	3.25	3.60	3.30	3.25	3.00	2.65	2.30	2.35	2.35
27	F	F	F	F	3.35	3.25	3.30	3.05	2.70	2.30	2.25	2.30
28	F	2.90F	F	3.00	F	F	u3.20s	3.10	3.00	2.65	2.40	2.20
29	2.65	u2.80s	3.00	u2.85s	3.20	3.30	3.15	2.90	2.45	2.30	2.50	2.60
30	2.70	2.70	2.55	2.45	2.60	3.00	3.00	2.95	2.70	C	2.40	2.35
31	3.20	u3.30s	3.10	3.20	3.05	2.85	3.10	2.80	2.70	2.45	2.30	2.35
Count	23	25	25	26	26	29	31	31	31	29	29	30
Median	2.95	2.90	2.90	3.10	3.25	3.00	3.00	2.80	2.60	2.30	2.30	2.25
Mean	2.90	2.85	2.95	3.05	3.15	3.00	3.05	2.85	2.55	2.35	2.30	2.25

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic (M3000) F<sub>2</sub>

Unit : —

Month : August 1960

TABLE 22—Contd.

Ionospheric Data

75° E Mean Time

Latitude : 10°2'N.

Longitude : 77°5'E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.15	2.20	2.10	2.30	2.30	2.55	2.50	2.40	2.30	2.45	2.65	2.90	1
2.30	2.20	2.25	2.30	2.30	2.35	2.35	2.30	u2.50 <sub>F</sub>	2.50	u2.75 <sub>s</sub>	3.05	2
2.30	2.35	2.40	2.45	2.55	2.65	2.65	2.55	2.55	2.55	2.70	3.00	3
2.30	2.20	2.25	2.35	2.50	2.55	2.55	2.45	2.50	2.55	2.80	3.00	4
2.25	2.25	2.40	2.50	2.50	2.60	2.60	2.55	u2.55 <sub>F</sub>	2.60	2.70	2.90	5
2.30	2.30	2.35	2.50	2.65	2.75	2.80	2.80	2.75	2.70	2.80	3.00	6
C	C	2.30	2.30	2.40	2.40	2.50	2.60	2.55	2.60	2.70	2.80	7
2.40	2.35	2.30	2.35	2.40	2.50	2.55	2.40	2.40	2.50	2.55	2.55	8
2.45	2.50	2.55	2.55	2.50	2.55	2.60	2.85	3.10	u3.00 <sub>s</sub>	3.00	2.90	9
2.15	2.20	2.30	2.30	2.40	2.50	2.40	F	F	F	F	2.65 <sub>F</sub>	10
2.15	2.20	2.20	2.15	2.10	2.35	2.45	2.40	2.35	2.35	F	F	11
2.20	2.20	2.30	2.30	2.35	2.35	2.25	2.25	2.50	2.75	2.90	3.15	12
2.20	2.15	2.15	2.15	2.20	2.15	2.10	F	F	F	F	F	13
2.20	2.20	2.20	2.30	2.35	2.35	2.25	u2.10 <sub>F</sub>	F	u2.40 <sub>F</sub>	F	2.80	14
2.10	2.10	2.10	2.20	2.20	2.25	2.15	1.95 <sub>F</sub>	u2.10 <sub>F</sub>	F	F	F	15
2.15	2.10	2.10	2.15	2.20	2.20	2.10	2.00 <sub>F</sub>	F	F	F	u2.20 <sub>F</sub>	16
2.15	1.90 <sub>w</sub>	2.05	2.30	2.40	2.45	2.35	2.35	2.45	2.40	2.35	2.40	17
2.25	2.15	2.20	2.15	2.10	2.25	2.15	u2.10 <sub>s</sub>	F	F	F	2.60	18
2.15	2.15	2.15	2.25	2.30	2.25	2.25	2.10	F	F	F	F	19
2.25	2.40	2.45	2.50	2.40	2.40	2.25	2.30	2.45	2.60	2.70	2.75	20
2.05	2.05	2.10	2.20	2.15	2.15	2.20	2.10	F	F	u2.45 <sub>FH</sub>	2.60	21
2.00	2.10	2.10	2.25	2.20	2.25	2.20	F	F	F	F	F	22
2.10	2.10	2.20	2.15	2.20	2.20	2.20	F	F	2.45	2.70	2.85	23
2.15	2.20	2.20	2.25	2.30	2.35	2.30	u2.20 <sub>F</sub>	F	F	F	F	24
2.35	2.35	2.40	2.55	2.65	2.80	2.35	2.55	u2.55 <sub>s</sub>	FS	FS	3.05	25
2.30	u2.40 <sub>s</sub>	2.35	2.30	2.40	2.50	2.40	2.20	F	F	F	F	26
2.25	2.25	2.30	2.30	2.50	2.55	2.40	2.50	F	F	F	F	27
2.20	2.25	2.25	2.30	u2.50 <sub>s</sub>	2.50	2.40	2.45	2.45	2.50	2.50	2.50	28
2.70	2.55	2.50	2.40	2.30	2.20 <sub>H</sub>	S	2.30	u2.50 <sub>s</sub>	u2.60 <sub>s</sub>	2.65	2.75	29
2.35	2.35	2.30	2.35	2.40	2.40	2.35	2.40	2.40	2.60	2.80	3.00	30
2.30	2.30	2.35	2.45	2.50	2.45	2.40	2.40	2.45	2.60	2.90	3.00	31
30	30	31	31	31	31	30	27	19	19	18	23	Count
2.20	2.20	2.25	2.30	2.40	2.40	2.35	2.40	2.50	2.55	2.70	2.85	Median
2.25	2.25	2.25	2.30	2.35	2.40	2.35	2.35	2.45	2.55	2.70	2.80	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : f<sub>o</sub>F<sub>2</sub>

Unit : Mc

Month : September 1960

TABLE 23

Ionospheric Data

75° E Mean Time

Latitude : 10°2'N.

Longitude : 77°5'E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	12.2	11.0	6.9	4.9	4.0	3.0	6.3	9.7	10.8	11.0	10.6	10.6
2	12.4 <sub>F</sub>	F	F	6.5	4.4	3.5 <sub>H</sub>	6.4	9.4	10.7	10.7	9.5	9.4
3	11.4	10.4	9.2	8.3	4.5	2.9	7.2	9.5	11.0	11.7	12.6	11.4
4	10.3	8.1	7.1	6.2	6.6	5.9	7.2	9.8	11.6	11.2	9.5	9.8
5	8.4	5.3	3.6	2.6	1.9	E	6.4	10.2	12.1	12.6	C	12.0
6	7.5	6.5	5.9	5.0	2.8	E	6.8	10.6	11.3	10.8	u11.3 <sub>C</sub>	u11.0 <sub>C</sub>
7	11.4	9.5	7.1	4.9	2.6	E	6.4	10.1	11.2	10.8	10.0	10.4
8	10.5	10.0	8.8	8.0	6.3	3.5	6.7	C	11.5	u11.8 <sub>R</sub>	10.6	10.0
9	11.0	10.1	8.6	7.9	7.6	4.8	6.7	9.8	11.1	10.8 <sub>H</sub>	10.0	10.2
10	10.8	u10.6 <sub>F</sub>	u9.7 <sub>S</sub>	8.8	8.2	6.3	7.7	10.5	12.1	12.8	12.4	11.6
11	F	F	F	F	F	F	u8.2 <sub>FS</sub>	10.6	11.2	C	C	C
12	F	F	10.6	u9.7 <sub>S</sub>	7.3	5.8	7.9	10.4	11.4	10.8	11.2	11.4
13	10.8	9.0	F	7.6	7.8	6.7	7.6	10.6	11.6	10.6	11.0	11.6
14	11.0	10.0	F	7.4	7.2	6.4	7.7	10.8	12.6	12.8	11.5	11.4
15	11.6	8.8	7.7	7.0	6.7	4.6	u7.2 <sub>S</sub>	10.6	12.6	C	11.4	11.0
16	F	F	u8.3 <sub>F</sub>	F	F	F	7.6	11.0	11.8	11.6	10.2	10.0
17	F	F	9.3	7.6	6.6	5.6	7.7	10.9	12.6	13.0	12.6	11.6
18	F	F	F	F	F	F	F	11.0 <sub>F</sub>	12.4	12.8	11.7	11.6
19	u12.8 <sub>F</sub>	F	u8.0 <sub>F</sub>	6.8 <sub>F</sub>	F	F	7.6	11.0	12.6	12.8	11.8	11.5
20	F	F	8.0 <sub>F</sub>	F	F	F	7.0	10.6	12.3	13.0	12.0	11.5
21	F	F	u8.7 <sub>F</sub>	7.4 <sub>F</sub>	5.3	3.0	u7.2 <sub>F</sub>	10.6	12.4	12.9	11.7	11.6
22	F <sub>S</sub>	F	10.3	9.1	6.4	4.9 <sub>F</sub>	7.5	11.0	12.0	12.2	11.2	11.0
23	F	12.4 <sub>F</sub>	u10.2 <sub>F</sub>	u8.0 <sub>F</sub>	5.4	4.6	7.3	10.6	12.2	12.7	11.7	10.9
24	F	11.1	F	6.2	4.0	2.7	6.8	10.1	12.3	13.4	13.4	10.6
25	11.4	u12.6 <sub>F</sub>	F	F	7.6	6.1	7.2	10.4	12.1	13.3	12.6 <sub>H</sub>	10.8
26	F	u8.7 <sub>S</sub>	u7.4 <sub>S</sub>	F	6.3	u5.7 <sub>F</sub>	u7.4 <sub>F</sub>	10.5	12.3	12.5	10.3 <sub>H</sub>	9.8
27	F	F	6.4 <sub>F</sub>	F	F	F	6.9	9.6	11.2	12.7	13.0	10.8
28	12.6	11.0	F	u8.5 <sub>F</sub>	u8.1 <sub>F</sub>	F	u7.4 <sub>F</sub>	10.1	11.1	10.6	10.3	10.2
29	F	F	F	u8.3 <sub>F</sub>	F	F	7.8	10.4	11.3	11.2	10.6	10.3
30	F	u9.8 <sub>F</sub>	u7.7 <sub>F</sub>	7.5	7.1	6.8	8.5	10.4	11.5	12.7	12.3	11.8
Count	16	18	21	23	23	22	29	29	30	28	28	29
Median	11.2	10.0	8.0	7.5	6.4	4.7	7.2	10.5	11.7	12.4	11.4	11.0
Mean	11.0	9.7	8.1	7.1	5.9	4.9	7.3	10.4	11.8	12.0	11.3	10.9

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF<sub>2</sub>

Unit : Mc

Month : September 1960

TABLE 23  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N.

Longitude : 77°5'E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
11.3	11.8	12.7	13.1	13.3	13.5	12.5	F	F	F	F	F	1
10.3	10.4	11.1	11.8	12.7	13.8	13.1	U11.9s	F	F	11.3	F	2
10.1	10.8	11.6	13.0	13.8	13.8	13.3	12.8	12.9	13.1	U11.8s	11.0	3
10.4	9.3	10.6	11.8	12.6	13.2	12.6	11.6	12.8	12.5	11.2	9.5	4
12.6	11.5	10.8	12.3	13.3	14.2	13.9	12.4	11.7	12.2	10.2	8.8	5
10.6	11.1	12.0	12.4	12.5	J12.0s	U12.0s	11.6	U11.7s	U12.1s	U12.0s	11.2	6
10.7	10.8	11.0	11.3	11.4	11.3	11.6	11.7	12.9	12.7	12.6	11.0	7
9.8	9.8	9.6	10.5	11.1	11.6	11.5	10.6	10.8	U11.8s	12.2	11.5	8
9.9	10.4	10.9	11.1	11.4	12.4	U11.7s	10.2	F	F	F	F	9
11.4	11.6	11.8	12.5	13.0	13.1	12.8	11.2	U10.6F	F	F	F	10
C	C	11.2	11.5	11.8	11.6	11.0	9.6F	F	F	F	U12.4F	11
11.4	11.8	12.5	13.2	13.4	13.2	11.6	F	F	F	F	F	12
12.3	12.4	13.4	13.8	14.0	14.2	12.8	F	F	F	F	F	13
11.8	12.2	12.6	C	U12.2s	U11.5s	10.0	F	F	U10.4Fs	11.0	12.5	14
10.8	11.1	11.4	11.8	11.6	11.3	10.4	9.0F	F	F	F	F	15
10.4	10.6	10.9	11.8	12.2	12.5	U11.8s	F	F	F	F	F	16
11.7	12.1	12.8	13.6	13.9	14.0H	13.1H	F	F	F	F	F	17
11.4	10.9	11.3	11.8	12.1	12.0	11.7	C	F	F	F	F	18
12.0	12.8	13.6	13.8	13.8H	13.3H	11.8H	F	F	F	F	F	19
11.4	11.6	12.0	12.6	11.9	11.6	10.8	F	F	F	F	F	20
11.4	11.8	11.9	12.4	12.6	13.2	12.8	10.8	10.4	F	F	U12.4F	21
11.0	11.4	12.2	13.0	13.2	13.0	12.6	10.5	F	F	F	F	22
10.6	10.5	11.3	12.4	13.0	12.8	U11.7s	S	F	F	F	F	23
10.4	10.8	11.6	11.8	12.4	12.6	11.4	10.5	F	F	F	F	24
10.6	10.8	11.3	11.6	11.6	11.4	10.8	J8.5F	F	F	F	F	25
10.3	10.6	10.8	11.7	12.3	J12.1	11.4	U9.7F	F	F	F	F	26
10.5	10.5	10.7	11.4	11.4	11.2	10.9	9.3	F	F	F	12.7	27
10.3	10.7	11.1	11.7	U11.7s	11.8	11.4	9.1	F	F	F	F	28
10.3	10.8	11.4	U12.0s	12.0	U12.1s	11.4	F	F	F	F	12.4	29
12.5	13.3	13.8	14.3	14.2	14.2	U12.6R	U10.8F	F	F	F	F	30
29	29	30	29	30	30	30	19	8	7	8	11	Count
10.7	10.9	11.4	12.0	12.4	12.6	11.7	10.6	U11.7	U12.2	U11.6	11.5	Median
11.0	11.2	11.7	12.3	12.6	12.6	11.9	10.6	U11.7	U12.1	U11.5	11.4	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : foF<sub>2</sub>

Unit : Mc

Month : September 1960

TABLE 23—Contd.

Ionospheric Data

750°E Mean Time

Latitude : 10°2'N.

Longitude : 77°5'E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	12.0	9.2	5.3	4.3	3.7	3.7	8.2	10.4	11.4	10.6	10.7	C
2	F	F	7.9	5.3	3.9	4.2	8.3	10.0	10.7	9.9	9.5	10.0
3	F	10.1	8.6	6.2	3.6	4.3	8.8	10.1	11.5	12.1	12.2 <sub>H</sub>	10.6
4	9.1	7.6	6.7	6.4	6.3	4.8	8.7	10.6	11.6	10.3	9.4	10.4
5	6.7	4.7	2.8	2.5	E	3.7	8.7	11.0	12.8	C	12.2	12.1
6	7.0	6.0	5.7	3.7	E	4.0	9.1	11.2	11.0	11.2	11.3	10.7
7	10.6	7.9	6.0	4.1	1.9	3.7	8.6	11.0	10.9	10.2	10.2	10.6
8	10.2	u9.1s	8.6	7.3	u5.1s	3.9 <sub>H</sub>	C	10.4	11.7	10.8	9.9	10.0
9	10.8	9.0	8.1	7.6	6.9	4.6 <sub>H</sub>	8.8	10.7	11.2	10.0	10.2	9.8
10	10.8	FS	u9.0 <sub>F</sub>	8.7	7.1	6.2	9.2	11.0	12.6	12.4	11.8	11.5
11	F	F	F	F	F	F	u9.6 <sub>FS</sub>	11.2	11.2	C	C	C
12	F	u10.7s	10.4	8.8	6.0	5.8	u9.8s	11.0	11.0	11.1	11.2	11.4
13	u9.8s	u7.8s	u7.2 <sub>FS</sub>	7.8	7.6	6.0	9.4	11.4	11.0	10.8	11.2	12.0
14	F	9.4	8.2	7.3	7.0	5.5	9.6	11.7	12.8	12.6	11.4	11.5
15	10.2	7.9	7.0	F	6.0	4.9	9.0	11.6	12.8	C	11.0	10.9
16	F	u9.3 <sub>F</sub>	F	u6.8 <sub>F</sub>	F	F	9.4	11.6	12.1	10.6	10.0	10.3
17	u11.0 <sub>F</sub>	u9.4 <sub>F</sub>	8.4	u7.2s	6.1	5.5	9.4	11.8	13.1	13.1	11.7	11.4
18	F	F	F	u7.1 <sub>F</sub>	F	F	F	11.5	13.2	12.1	11.6	11.5
19	F	u9.0 <sub>F</sub>	F	F	F	F	9.8	12.1	13.0	12.6	11.5	11.7
20	F	F	u6.6 <sub>F</sub>	F	F	u4.5 <sub>F</sub>	9.1	11.9	13.0	13.0	11.6	11.5
21	u11.4 <sub>F</sub>	u9.7 <sub>F</sub>	F	6.5	4.0	F	9.1	11.5	12.8	12.6	11.6	11.6
22	12.2	10.9	F	F	F	4.9	9.8	11.6	12.5	11.4	11.2	11.0
23	12.6	u11.6s	F	6.6	4.9	4.9	9.5	11.4	12.7	12.7	11.2	10.8
24	F	u9.6s	7.7	5.0	3.4	4.4	8.9	11.4	13.0	13.4	12.2 <sub>H</sub>	10.4
25	12.5	FS	F	8.3	7.0	5.3	9.1	11.1	13.0	13.3	11.0	10.6
26	F	F	6.6	F	6.1	5.6	u9.4 <sub>F</sub>	11.6	12.5	11.8	10.0	9.9
27	F	F	5.7	F	u5.8 <sub>F</sub>	4.7	8.9	10.1	11.9	13.0	12.6 <sub>H</sub>	10.5
28	11.7	u9.7s	F	8.4	F	u6.2 <sub>F</sub>	9.0	10.8	10.8	10.6	10.1	10.0
29	u11.3 <sub>F</sub>	F	F	F	F	6.3	9.3	10.8	11.7	10.8	10.4	10.3
30	u11.0 <sub>F</sub>	8.8	F	7.4	6.9 <sub>F</sub>	6.6	10.1	10.6	12.3	12.8	11.7	12.0
Count	18	21	19	22	22	25	28	30	30	27	29	28
Median	10.9	9.2	7.2	7.0	5.9	4.9	9.1	11.2	12.2	11.8	11.2	10.8
Mean	10.6	8.9	7.2	6.5	5.5	5.0	9.2	11.1	12.1	11.7	11.1	10.9

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF<sub>2</sub>

TABLE 23—Contd.

Latitude : 10°2'N.

Unit : Mc

Ionospheric Data

Longitude : 77°5'E.

Month : September 1960

75° E Mean Time

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
11.7	12.2	12.8	13.6	13.4	13.1	j12.0 <sub>F</sub>	F	F	F	F	11.8	1
10.3	10.8	11.5	12.4	13.1	13.5	12.9	10.8	11.4	F	11.6	F	2
10.4	11.3	12.4	13.6	13.8	u13.4 <sub>C</sub>	12.8	12.8	13.0	12.4	u11.6 <sub>S</sub>	10.4	3
9.8	9.8	11.2	12.4	12.8	13.0	11.6	12.5	12.8	11.2	10.4	9.2	4
12.0	11.0	11.4	12.8	13.5	14.8	12.6	12.2	11.4	11.6	9.1	8.4	5
10.8	11.8	12.2	12.4	12.5	u11.8 <sub>S</sub>	11.6	11.6	S	12.2	11.9	11.6	6
10.6	10.8	11.1	11.4	11.5	11.5	11.4	12.8	12.4	12.6	12.3	10.8	7
9.8	9.6	10.0	10.8	11.4	11.7	11.0	10.5	11.4	u11.7 <sub>S</sub>	12.4	11.0	8
10.1	10.8	11.0	11.2	j12.2 <sub>S</sub>	j12.3 <sub>S</sub>	11.4	F	F	F	F	u11.0 <sub>F</sub>	9
11.5	11.6	12.0	12.8	13.0	13.0	u11.6 <sub>S</sub>	10.7	u10.6 <sub>F</sub>	F	F	F	10
C	10.9	11.3	11.6	12.0	11.5	10.4	F	F	F	F	u12.2 <sub>S</sub>	11
11.4	12.0	13.0	13.6	13.4	12.8	u11.0 <sub>R</sub>	F	C	F	F	F	12
12.3	13.0	13.8	14.0	14.0	13.5	u11.7 <sub>S</sub>	F	F	F	F	F	13
12.0	12.4	13.0	C	C	10.8	8.8	F	F	F	u11.4 <sub>FS</sub>	F	14
10.8	11.2	11.6	11.6	11.5	10.8	9.2	F	F	F	F	F	15
10.3	10.6	11.4	12.0	12.3	12.4	11.1	F	F	F	F	F	16
11.7	12.4	13.3	13.8	14.0	13.7 <sub>H</sub>	12.1 <sub>H</sub>	F	F	F	F	u11.4 <sub>F</sub>	17
11.1	11.0	11.5	11.9	12.0	12.0	10.9	F	F	F	F	F	18
12.5	13.2	13.7	13.8	13.6 <sub>H</sub>	12.9 <sub>H</sub>	10.7 <sub>H</sub>	F	F	F	F	F	19
11.5	11.8	12.4	12.2	11.7	11.3	9.7	F	F	F	F	F	20
11.6	11.7	12.0	12.6	12.7	13.2	11.7	j10.2 <sub>F</sub>	F	11.1 <sub>F</sub>	F	13.4	21
11.0	11.8	12.6	13.2	13.2	12.9	11.7	F	F	F	F	F	22
10.5	10.9	11.7	12.6	13.2	12.4	11.0	FS	F	F	u12.4 <sub>F</sub>	u11.2 <sub>F</sub>	23
10.5	11.3	11.6	12.0	12.7	11.6	11.0	10.1	F	F	F	F	24
10.8	11.1	11.4	11.6	11.4	11.2	u9.7 <sub>S</sub>	F	F	F	F	F	25
10.5	10.7	11.2	12.0	12.1	11.9	10.8	u9.0 <sub>F</sub>	F	F	F	11.0	26
10.7	10.6	10.9	11.3	11.3	11.3	10.2	F	F	F	12.5	F	27
10.4	10.9	11.4	11.7	11.8	11.5	10.5	F	F	10.7	F	F	28
10.5	11.2	11.8	11.9	12.4	11.7	10.2	F	F	F	12.3	F	29
12.9	12.7	14.2	14.3	14.1	13.7	u11.8 <sub>S</sub>	F	F	F	F	FS	30
29	30	30	29	29	30	30	11	7	8	11	13	Count
10.8	11.2	11.6	12.4	12.7	12.4	11.0	10.8	u11.4	u11.6	11.9	11.0	Median
11.0	11.4	12.0	12.4	12.6	12.4	11.1	11.2	u11.8	u11.7	11.6	11.0	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foFI

TABLE 24

Latitude : 10° 2' N.

Unit : Mc.

Ionospheric Data

Longitude : 77° 5' E.

Month : September 1960

75°E Mean Time.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	C	L
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	C	C	C
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	C	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	LH
19								L	LH	L	L	L
20								L	L	L	L	LH
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26								L	L	L	L	B
27								L	LH	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
Count								...	..	...	..	..
Median								...	...	...	...	...
Mean								..	...	...	...	...

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foFI  
Unit : Mc  
Month : September 1960

TABLE 24  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N.  
Longitude: 77.5° E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	L	L							1
L	L	L	L	A	A							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
												5
L	L	L	L	L	L							6
L	L <sub>LH</sub>	L	L	L	L							7
L	L	L	L	L	L							8
L	L	L	L	L	L							9
												10
C	C	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
												15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
												20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
												25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L <sub>LH</sub>	L	L	L	L	L							28
L	L	L	L	L	L							29
												30
..	..	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foFI

Unit : Mc

Month : September 1960

TABLE 24—Contd.

Ionospheric Data

75°E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							L	L	L	L	L	C
2							L	L	L	L	U <sub>5</sub> ·IL	L
3							L	L	L	L	L	L
4							L	L	L	C	L	L
5												
6								L	L	L	L	L
7							C	L	L	L <sub>H</sub>	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10												
11								L	L	C	C	C
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	C	L	L
15												
16							L	L	L	L	L	L
17								L	L	L	L <sub>H</sub>	L
18							L	L	L <sub>H</sub>	L	L	L
19							L	L	L	L	L	L
20												
21								L	L	L	L	L
22								L	L	L	L	L
23							L	L	L	L	L	L
24							L	L	L	L	L	L
25												
26								L	L	L	L	B
27								L	L	L	L	L
28							L	L	L	L	L	L
29							L	L	L	L	L <sub>H</sub>	L
30												
Count							..	..	..	..	I	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foFI

Unit : Mc

Month : September 1960

TABLE 24—*Contd.*

Ionospheric Data

75°E Mean Time

Latitude : 10°2' N.

Longitude: 77°5' E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L	L								1
L	L	L	A	A								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	..								5
L	L	L	L	L								6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
Q	L	L	L	L								11
L	L	L	L	L								12
L	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	L	L	..								16
L	L	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	..								24
L	L	L	L	..								25
L	L	L	L	L								26
L	L	L	L	..								27
L	L	L	L	..								28
L	L	L	L	L								29
L	L	L	L	L								30
..	..	..	..	..								Count
..	..	..	..	..								Median
..	..	..	..	..								Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE

Unit : Mc

Month : September 1960

TABLE 25  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								2.8	A	A	A	A
2								A	B	A	A	B
3								B	B	B	B	B
4							2.0	A	A	A	A	A
5								2.8	A	A	C	A
6								A	A	A	A	A
7							R	A	A	A	A	A
8								C	A	A	A	A
9								2.7	A	A	A	A
10								2.9	A	A	A	A
11								A	A	C	C	C
12								A	A	A	A	A
13								A	A	A	A	A
14								2.9	A	A	A	A
15								3.0	A	C	A	A
16								A	A	A	A	A
17								2.9H	A	A	A	A
18								A	A	A	A	A
19								A	A	A	A	A
20								2.5	A	A	A	A
21								2.9	A	A	A	A
22								2.7	A	A	A	A
23								2.8	3.2	A	A	A
24								2.6	3.1	A	A	A
25								2.8	A	A	A	A
26								U2.7R	A	A	A	B
27								U2.7R	A	A	A	A
28								A	A	A	A	A
29								U2.9A	A	A	A	A
30								A	U3.3R	A	A	A
Count							1	16	3	..	..	..
Median							..	2.8	..	..	..	..
Mean							..	2.8	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE  
Unit : Mc  
Month : September 1960

TABLE 25  
Ionospheric Data  
75°E Mean Time

Latitude: 10°2' N.  
Longitude: 77°5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	4.0	A	A	A							1
A	B	A	A	A	A							2
B	B	A	A	A	A							3
A	A	A	A	A	B							4
A	A	A	A	R	-							5
A	A	A	A	A	R							6
A	A	A	A	A	2.6							7
A	A	A	A	A	A							8
A	A	A	A	A	A							9
A	A	A	A	u3.5a	F							10
C	C	A	A	A	A							11
A	A	A	A	A	A							12
A	A	A	A	A	A							13
A	A	A	C	A	A							14
A	A	A	A	A	A							15
A	A	A	A	A	-							16
A	A	A	A	3.2	-							17
A	A	A	A	A	-							18
A	B	A	A	A	-							19
A	A	A	A	A	A							20
A	A	A	A	A	..							21
A	A	A	A	A	A							22
A	A	A	A	A	A							23
A	A	A	A	A	A							24
A	A	A	A	A	..							25
B	A	A	A	A	..							26
A	A	A	A	A	..							27
A	A	A	A	A	..							28
A	A	A	A	A	A							29
A	A	A	A	A	..							30
..	..	I	..	2	I							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



500

Characteristic : foE

Unit : Mc

Month : September 1960

TABLE 25—Contd.

Ionospheric Data

75°E Mean Time

Latitude: 10° 2' N.

Longitude: 77° 5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							..	A	A	A	A	A
2							2.3H	A	A	A	A	B
3							B	A	B	B	B	B
4							2.6	A	A	A	A	A
5							..	2.9	A	C	A	A
6							R	A	A	A	A	A
7							R	A	A	A	A	A
8							C	A	A	A	A	A
9							U2.4R	A	A	A	A	A
10							2.5	A	A	A	A	A
11							A	A	A	C	C	C
12							2.3	A	A	A	A	A
13							2.6	A	A	A	A	A
14							2.4	A	A	A	A	A
15							..	A	A	C	A	A
16							2.5	A	A	A	A	A
17							2.6H	A	A	A	A	A
18							2.6	A	A	A	A	A
19							A	A	A	A	A	A
20							2.5	A	A	A	A	A
21							2.5	A	A	A	A	A
22							2.7	A	A	A	A	A
23							2.3	3.0	A	A	A	A
24							2.3	A	3.2	A	A	A
25							R	3.0	A	A	A	A
26							..	A	A	A	B	A
27							..	2.7	A	A	A	B
28							..	A	A	A	A	A
29							U2.1R	A	A	A	A	A
30							A	A	A	A	A	A
Count							16	4	1	..	..	..
Median							2.5	..	..	..	..	..
Mean							2.4	..	..	..	..	..

Sweep 1.0 Mc, to 25.0 Mc, in 27 seconds.

500

Characteristic : foE

Unit : Mc

Month : September 1960

TABLE 25—Contd.

Ionospheric Data

75°E Mean Time

Latitude: 10°2' N.

Longitude: 77°5' E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	A	A	A								1
B	A	A	A	A								2
B	A	A	A	A								3
A	A	A	A	A								4
A	A	A	B	A								5
A	A	A	A	A	U2·OR							6
A	A	A	A	A								7
A	A	A	A	A								8
A	A	A	A	A								9
												10
C	A	A	A	A								11
A	A	A	A	A								12
A	A	A	A	A								13
A	A	A	C	C								14
A	A	A	A	A								15
A	A	A	A	A								16
A	A	A	3·4	A								17
A	A	A	A	A								18
B	A	A	A	A								19
A	A	A	A	A								20
A	A	A	A	A								21
A	A	3·8	A	A								22
A	A	3·7	3·3	A								23
A	A	A	A	A								24
A	A	A	A	A								25
A	A	A	A	A								26
A	A	A	A	A								27
A	A	A	A	A								28
A	A	A	A	A								29
A	A	A	A	A								30
..	..	2	2	..	1							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : September 1960

TABLE 26  
Ionospheric Data  
75°E Mean Time

Latitude : 102°N

Longitude : 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								6.6	10.4	11.4	12.6	12.2
2								8.0	9.2	10.6	12.0	12.6
3								G	10.6	10.4	12.6	12.0
4				u5.1s			G	9.0	11.5	11.3	12.6	11.8
5				..				G	9.4	9.4	C	12.3
6	u4.8s	u9.0s	4.3	S	u5.1s	..	..	u9.0s	u10.4s	11.0	13.0	13.0
7	4.2	..	..	u6.0s	..	..	G	u7.8s	12.0	11.4	12.7	12.6
8	..			..				C	11.6	11.6	12.6	13.8
9	4.1			..				G	10.0	11.2	12.3	12.6
10	..			..				G	10.2	12.0	13.0	13.0
11	7.0	6.0	3.6	6.0				9.0	11.6	C	C	C
12	4.8	5.0	1.8	..	..	3.5	..	7.0	11.6	12.0	13.0	13.0
13	..	..	..	..				9.0	12.0	12.0	13.0	13.2
14	6.0	3.6	..	4.8				G	11.6	12.2	13.0	13.4
15	..							7.0	11.0	C	13.0	17.0
16	..							8.0	12.2	12.0	12.7	12.8
17	..							G	12.2	12.6	13.8	13.6
18	4.6	..	..	..				11.4	10.8	12.8	13.2	13.0
19				2.4				8.6	12.4	12.0	12.6	12.8
20								G	10.0	11.0	12.0	12.0
21								6.7	9.2	10.5	11.6	12.3
22								7.0	9.2	10.6	11.4	12.5
23								7.0	9.4	10.2	12.0	12.0
24								G	G	9.8	11.6	11.0
25								G	8.6	10.6	11.6	11.2
26								5.1	9.2	10.3	11.4	10.6
27								G	7.2	9.6	11.1	11.8
28								7.8	9.8	10.1	10.6	11.9
29	4.0	..	..	..	..	..	..	7.8	8.8	10.9	11.4	11.4
30					3.8	..	..	7.0	G	11.0	10.8	12.4
Count	8	4	3	5	2	1	2	29	30	28	28	29
Median	4.7	..	..	5.1	..	..	..	7.0	10.3	11.0	12.6	12.5
Mean	4.9	..	..	4.9	..	..	..	7.8	10.4	11.1	12.3	12.5

Sweep 1°0 Mc. to 25°0 Mc. in 27 seconds.

Characteristic : foEs

TABLE 26

Latitude : 10°2 N.

Unit : Mc

Ionospheric Data

Longitude : 77°5'E.

Month : September 1960

75°0' E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
12.2	11.8	10.6	10.0	9.0	7.0	..					3.4	1
12.6	12.0	13.4	12.2	12.0	9.0	8.0			3.3	3.8	4.4	2
12.0	11.0	12.0	12.0	7.0	6.2	5.0		4.2	4.4	4.0	6.0	3
12.2	11.4	11.6	13.4	G	7.8	..		..	..	..	..	4
13.4	12.0	10.6	10.6	6.2	..	..		4.6	..	..	3.3	5
12.0	11.4	12.6	11.4	10.0	8.4	..			..	u9.0s	u8.3s	6
12.7	13.6	12.8	12.0	9.2	7.2	..			..	..	..	7
13.2	13.0	13.0	12.0	10.6	13.7	u8.0s			S	S	u6.5s	8
13.2	13.0	12.6	12.0	u10.0s	9.0						..	9
12.6	13.2	13.4	11.6	u10.0s	9.0						..	10
C	C	13.8	12.2	11.0	7.6						9.0	11
13.0	12.2	11.4	9.2	11.0	9.0						4.2	12
14.0	12.2	12.0	11.0	9.2	8.4					4.6	4.6	13
13.4	12.6	13.0	C	12.2	7.0							14
16.0	13.0	14.6	12.0	10.4	9.0							15
13.0	13.8	12.6	10.8	10.4	8.0							16
13.2	11.8	6.8	8.0	7.0	8.8							17
13.8	12.8	13.0	11.0	u12.0s	8.6		C					18
12.6	11.0	12.0	11.8	10.6	..							19
12.4	12.2	12.0	11.0	10.4	7.8							20
12.2	12.0	11.5	9.8	9.2	7.0				4.2	3.2	9.0	21
11.8	10.6	9.4	8.3	8.8	8.0						7.0	22
11.4	11.7	9.6	10.4	8.8	6.6						..	23
11.6	10.8	12.0	10.0	8.0	7.0						4.6	24
11.2	11.4	11.4	9.0	9.0	..					2.6	..	25
11.6	11.4	11.3	8.8	8.0	..							26
11.8	12.0	11.0	9.9	8.8	..							27
12.4	11.3	12.3	10.4	9.2	6.8				2.1	2.6	4.6	28
12.2	11.9	12.0	9.6	8.6	6.3						..	29
11.8	11.1	11.0	9.9	8.2	..						u4.4s	30
29	29	30	29	30	24	3	..	2	4	7	14	Count
12.4	12.0	12.0	10.8	9.2	7.9	..	..	..	..	3.8	4.6	Median
12.6	12.0	11.8	10.7	9.5	8.0	..	..	..	..	4.3	5.6	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

TABLE 26—*contd.*

Latitude : 10°2N

Unit : Mc

Ionospheric Data

Longitude : 77°5'E

Month : September 1960

75° E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							..	8.0	10.8	11.8	12.2	C
2							G	9.0	10.4	12.0	12.0	12.2
3	..	2.8	..	..			G	10.0	10.0	12.0	12.4	12.0
4	..	..	..	5.0			6.4	11.6	11.7	12.5	12.4	12.8
5	..	..	..	..			..	G	10.6	C	12.2	11.0
6	u7.0s	S	S	u4.8s			G	S	11.4	12.0	13.2	12.8
7	..	..	10.0	..			G	10.5	12.0	12.4	13.0	13.3
8	..						C	u10.0s	11.3	12.6	13.0	13.4
9	3.0						G	9.0	11.8	12.4	13.0	13.1
10	..						G	7.0	12.0	13.0	13.7	13.0
11	11.0	4.6	6.0	7.0			7.0	10.4	12.0	C	C	C
12	4.8	3.8					G	9.0	12.0	14.0	13.8	13.6
13	..	..					G	10.0	12.0	13.0	12.4	13.0
14	7.0	..					G	9.0	12.6	14.0	13.6	13.6
15		..					..	9.0	11.4	C	13.2	14.0
16							G	11.6	12.6	12.7	12.4	13.8
17							G	10.8	11.8	14.0	13.2	13.0
18				5.6	3.9	..	6.4	8.6	12.0	13.0	13.8	14.8
19							u7.0s	12.0	12.0	13.4	13.0	12.6
20							G	7.8	10.2	11.4	12.0	13.0
21							G	8.2	10.4	12.4	12.0	12.6
22							..	8.6	10.4	11.7	11.7	12.0
23							G	7.6	10.6	11.6	12.0	12.0
24							G	8.0	7.4	11.0	11.6	11.7
25	2.8						G	6.8	9.6	11.2	11.3	11.0
26							..	7.6	10.3	11.8	11.1	11.4
27							..	G	8.1	11.8	11.1	11.7
28							..	8.2	9.7	10.8	10.6	11.4
29							G	9.3	9.8	12.0	11.8	12.0
30	2.7						6.0	7.8	11.0	11.4	11.5	12.1
Count	7	3	2	4	1	..	22	29	30	27	29	28
Median	4.8	..	..	..	..	..	G	9.0	11.2	12.0	12.4	12.7
Mean	5.5	..	..	..	..	..	6.6	9.1	10.9	12.3	12.4	12.6

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foEs

Unit : Mc

Month : September 1960

TABLE 26—*contd.*

Ionospheric Data

75° E Mean Time

Latitude : 10.°2N.

Longitude : 77.5°E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
11.6	10.8	10.0	9.0	7.0	..	..	..	..	4.4	4.0		1
12.0	11.6	12.4	12.6	11.0	9.0	u5.0s	..	..	4.4	4.0		2
G	12.0	12.0	10.0	6.4	6.0	..	..	4.8	4.2	..		3
12.6	11.6	12.5	6.0	5.8	..					..		4
12.4	13.2	11.4	7.8	..	..			S		..	u3.2s	5
11.5	12.4	11.4	10.8	u9.0s	u5.6s		1.8	..	..	u9.0s	5.6	6
12.3	12.4	u12.0s	11.2	8.1	u7.0s			..	..	4.0	..	7
12.6	13.0	12.3	11.0	12.1	13.5			u5.8s	u8.0s	S	u7.0s	8
12.4	12.6	11.4	10.6	9.0	6.8							9
13.0	13.0	u12.0s	12.0	9.0	..							10
C	13.4	13.0	11.0	9.0	..			9.4	..	..	5.4	11
13.0	12.6	10.0	11.2	9.2	6.0					..	4.8	12
13.2	12.0	12.0	9.4	8.8	6.0					u6.0s	3.0	13
12.0	13.0	12.0	C	C	4.2						..	14
15.0	15.2	13.0	12.0	10.0						4.6	..	15
13.4	12.2	12.0	10.4	8.8							..	16
12.6	9.4	7.6	G	7.8							4.2	17
14.0	12.8	12.0	10.6	11.0								18
11.0	11.4	11.0	11.6	8.0								19
12.1	12.2	12.0	10.0	8.7								20
12.2	11.7	10.0	9.2	7.7						5.6	..	21
11.2	10.6	7.8	9.2	8.0						3.4	8.0	22
12.2	15.4	8.0	8.4	7.4	4.7					..		23
12.0	11.4	10.8	9.0	6.6						4.0		24
11.4	12.0	9.8	9.2	7.0						..		25
11.4	11.6	10.3	8.3	..								26
11.1	11.8	10.1	9.2	7.8					2.8	3.0	..	27
11.6	11.4	10.1	9.7	7.1							5.1	28
12.4	12.1	10.5	8.8	8.2							..	29
10.9	9.8	10.3	8.6	7.0							S	30
29	30	30	29	27	10	1	1	3	4	9	9	Count
12.2	12.0	11.4	9.7	8.1	6.0	..	..	..	..	4.0	5.1	Median
12.2	12.2	11.0	9.9	8.4	6.9	..	..	..	..	4.8	5.1	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : FbEs

Unit : Mc

Month : September 1960

TABLE 27

Ionospheric Data

75° E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								..	3.3	3.6	4.0	4.1
2								2.9	..	3.8	3.9	4.6
3								G	..	..	4.4	..
4				4.2			G	3.0	3.7	3.8	4.0	4.2
5				..				G	3.4	3.8	C	4.0
6		2.6		2.9				2.8	3.4	3.8	4.0	4.2
7	1.5						G	2.8	3.4	3.9	4.0	4.2
8	..							G	3.4	3.8	4.1	4.3
9	2.4							C	3.4	3.8	4.1	4.2
10	..							G	3.4	3.9	4.0	4.3
11	2.4	2.0	1.7	2.0				2.9	3.4	C	C	C
12	1.8	2.2		..				3.0	3.6	3.8	4.2	4.2
13	..	..		..				3.0	3.5	3.9	4.2	4.2
14	1.7	1.5		1.5				G	3.6	3.9	4.2	4.3
15								3.0	3.5	C	4.0	4.2
16								3.0	3.5	4.1	4.1	4.6
17								G	3.5	4.0	4.1	4.4
18	1.6							3.0	3.5	4.0	4.2	4.3
19								3.0	3.4	4.0	4.3	4.5
20								G	3.6	4.0	4.2	4.3
21								2.9	3.4	3.8	4.1	4.2
22								2.9	3.5	3.9	4.1	4.2
23								2.8	3.4	3.8	4.0	4.1
24								G	G	3.8	4.0	4.2
25								G	3.4	3.8	4.0	4.3
26								2.9	3.4	3.9	4.1	..
27								..	3.5	3.9	4.1	4.3
28								2.9	3.4	3.7	3.9	4.1
29	2.0							2.8	3.4	3.7	4.0	4.0
30								2.7	G	3.7	4.0	4.0
Count	7	4	1	4	..	..	2	27	28	27	28	27
Median	1.8	..	..	..	..	..	..	2.8	3.4	3.8	4.1	4.2
Mean	1.9	..	..	..	..	..	..	2.9	3.5	3.8	4.1	4.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : FbEs

Unit : Mc

Month : September 1960

TABLE 27  
Ionospheric Data  
75° E Mean Time

Latitude : 10.2° N.

Longitude : 77.5° E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
4.1	4.0	4.0	3.8	3.2	2.6	..			2.2		2.4	1
4.4	4.4	4.3	4.4	5.0	5.0	3.0			2.2		2.1	2
4.6	4.8	4.4	5.0	3.4	2.7	2.6		2.0	2.2		2.1	3
4.3	4.2	4.0	5.2	G	2.8	..		2.2			2.2	4
4.4	4.0	3.9	3.9	3.2	..	..		2.2			2.2	5
4.6	4.2	4.0	3.6	3.2	2.6	..				1.8	2.8	6
4.3	4.2	4.0	3.8	3.2	2.7	..						7
4.3	4.2	4.0	3.8	3.8	4.5	2.6			2.2	3.0		8
4.2	4.0	4.0	3.7	3.3	3.0							9
4.2	4.2	4.0	3.7	3.3	2.7							10
C	C	4.0	3.7	3.2	2.8						2.2	11
4.4	4.4	4.0	3.7	3.2	2.8							12
4.2	4.2	4.0	3.8	3.3	2.8							13
4.4	4.4	4.0	C	3.2	2.7					1.9		14
4.3	4.4	4.4	3.8	3.4	2.6							15
4.4	4.2	4.0	3.8	3.3	2.7							16
4.4	4.3	4.2	4.0	3.2	2.8							17
4.4	4.3	4.0	3.8	3.4	2.7		C					18
4.5	..	4.2	5.0	3.4	..							19
4.4	4.3	4.0	3.8	3.3	2.7							20
4.4	4.2	3.9	3.6	3.3	..						3.2	21
4.4	4.2	4.0	3.8	3.4	..						2.8	22
4.2	4.1	4.0	3.8	3.3	3.0						..	23
4.2	4.3	4.0	3.7	3.3	3.0						2.2	24
4.3	4.0	3.8	3.6	3.1	..							25
..	4.2	4.0	3.6	3.1	..							26
4.2	4.1	3.8	3.5	3.3	..							27
4.1	4.0	4.0	3.6	3.0	..				2.0	1.9	1.9	28
4.0	4.0	3.6	3.5	3.1	2.9							29
4.2	4.0	3.8	3.5	3.0	..						2.3	30
28	28	30	29	30	21	3	..	2	4	4	10	Count
4.3	4.2	4.0	3.8	3.2	2.8	..	..	..	..	..	2.2	Median
4.3	4.2	4.0	3.9	3.3	2.9	..	..	..	..	..	2.4	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : FbEs  
Unit : Mc  
Month : September 1960

TABLE 27—*contd.*  
Ionospheric Data  
75° E Mean Time

Latitude : 10° 2' N.  
Longitude : 77° 5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							..	3.0	3.5	3.8	4.2	C
2							G	3.1	3.9	3.8	4.0	4.8
3		1.7					G	3.8	..	4.4	4.4	..
4				1.8			..	3.9	3.6	3.9	4.2	4.3
5							..	G	3.6	C	4.0	4.1
6	3.2	2.5	2.4	2.7			G	3.1	3.6	4.0	4.0	4.2
7			2.2				G	3.2	3.6	4.1	4.2	4.4
8							C	3.2	3.6	4.0	4.2	4.4
9							G	3.2	3.6	4.0	4.1	4.3
10							G	3.2	3.6	4.1	4.2	4.4
11	2.8	1.7	1.9	2.0			2.6	3.2	3.6	C	C	C
12	2.2	1.7					G	3.3	3.7	4.1	4.2	4.2
13	..						G	3.3	3.7	4.0	4.2	4.4
14	2.2						G	3.3	3.8	4.0	4.4	4.4
15							..	3.3	3.7	C	4.2	4.2
16							G	3.2	3.7	4.0	4.4	4.4
17							G	3.2	3.8	4.0	4.4	4.4
18				1.6	1.5		2.6	3.3	3.8	4.0	4.3	4.4
19							2.6	3.4	3.8	4.1	4.3	4.4
20							G	3.4	3.8	4.0	4.2	4.4
21							G	3.2	3.6	4.0	4.3	4.3
22							..	3.3	3.8	4.0	4.3	4.4
23							G	3.2	3.6	3.9	4.1	4.2
24							G	3.1	..	4.0	4.0	4.3
25	1.6						G	3.2	3.8	4.0	4.2	4.3
26							..	3.2	3.6	4.0	4.2	..
27							..	..	3.7	3.9	4.1	4.1
28							..	3.1	3.5	3.8	4.0	4.2
29							G	3.1	3.6	3.8	4.2	4.1
30							2.9	3.1	3.5	3.8	4.1	4.2
Count	5	4	3	4	1	..	21	29	28	27	29	26
Median	2.2	..	..	..	..	..	G	3.2	3.6	4.0	4.2	4.3
Mean	2.4	..	..	..	..	..	..	3.3	3.7	4.0	4.2	4.3

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : FbEs  
Unit : Mc  
Month : September 1960

TABLE 27—*contd.*  
Ionospheric Data  
75° E Mean Time

Latitude : 10°2' N.  
Longitude : 77°5' E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
4.0.	4.8	3.8	3.4	3.0								1
..	4.2	4.2	6.0	5.0	4.4	2.4			2.8	2.0		2
G	4.3	4.8	4.6	3.3	2.6							3
4.2	4.0	4.4	3.6	3.0	..							4
4.2	4.0	3.9	3.5	..	..			2.4				5
4.3	4.0	3.8	3.3	2.9	2.2			..		3.4	1.8	6
4.2	4.2	3.9	3.5	3.0	..			..		1.8	..	7
4.3	4.1	4.0	3.4	4.4	4.0			2.3	2.8	2.8	2.4	8
4.2	4.1	3.8	3.5	3.4				..				9
4.3	4.1	3.9	3.5	3.0				..				10
C	4.2	4.0	3.6	3.0				1.5				11
4.2	4.2	3.9	3.6	3.1								12
4.3	4.0	3.8	3.6	3.2	2.2					2.0	1.8	13
4.4	4.4	4.0	C	C						..	..	14
4.4	4.2	4.0	3.5	3.0						2.0	..	15
4.4	4.1	4.0	3.5	3.0							..	16
4.4	4.3	4.3	G	3.1							1.3	17
4.3	4.2	3.9	3.5	3.3								18
..	4.4	4.6	4.0	3.1								19
4.3	4.2	4.0	3.5	3.0								20
4.4	4.1	4.0	3.4	..						2.0		21
4.3	4.2	4.0	3.6	3.3						1.7	2.7	22
4.2	4.0	3.9	3.5	3.2	2.6					1.7		23
4.3	4.1	4.0	3.6	3.3								24
4.2	4.0	3.8	3.4									25
4.3	4.0	3.8	3.4									26
4.1	4.0	3.9	3.3						1.9	1.9		27
4.2	3.8	3.7	3.4								1.9	28
4.0	3.9	3.6	3.3	3.1								29
4.0	3.9	3.7	3.1									30
27	30	30	29	22	6	1	..	3	3	10	6	Count
4.3	4.1	3.9	3.5	3.1	2.6	..	..	..	..	2.0	1.8	Median
4.2	4.1	4.0	3.6	3.3	3.0	..	..	..	..	2.1	2.0	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic: f min

Unit : Mc

Month : September 1960

TABLE 28  
Ionospheric Data  
75° E Mean Time

Latitude: 10° 2' N.

Longitude: 77° 5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	1.6	1.7	1.6	1.4	1.8	1.7	2.0	1.7	2.1	2.4	2.6	3.0
2	1.7	1.6	1.3	1.3	1.4	1.3	2.0	1.9	3.9	2.5	2.5	4.4
3	2.0	1.6	1.6	1.8	1.7	1.5	2.6	4.2	4.3	4.4	4.2	5.1
4	2.0	1.9	1.7	1.4	1.6	1.6	1.7	2.0	2.7	2.7	2.9	2.8
5	1.7	1.7	1.4	1.7	1.5	E	2.1	1.7	2.0	2.6	C	2.8
6	1.8	1.6	1.9	2.5	1.8	E	2.2	1.6	2.0	2.6	2.5	3.0
7	1.2	1.5	1.6	1.8	1.6	E	1.8	1.6	2.4	2.6	2.9	3.0
8	1.3	1.3	1.5	1.4	1.5	1.7	2.4	C	2.0	2.4	2.6	2.8
9	2.1	1.7	1.5	1.7	1.5	1.3	2.1	1.8	1.7	2.2	2.4	2.7
10	1.8	1.5	1.6	1.5	1.6	1.6	2.2	1.9	2.1	2.4	2.7	2.8
11	1.2	1.0	1.0	1.5	1.7	1.4	2.2	1.9	2.2	C	C	C
12	1.4	E	1.4	1.8	1.5	1.3	2.0	1.6	2.0	2.4	2.4	2.6
13	1.8	1.8	1.7	1.5	1.6	1.9	2.2	1.7	2.0	2.3	2.6	2.8
14	1.4	1.5	1.3	1.1	1.5	1.4	2.1	2.0	2.4	2.5	3.0	3.2
15	1.7	2.1	1.5	1.5	1.7	1.6	2.4	2.1	2.4	C	2.6	3.0
16	1.2	1.2	1.4	1.4	1.4	1.6	2.1	1.8	2.2	2.5	3.0	3.2
17	1.3	1.6	1.3	1.2	1.6	1.2	2.1	2.0	2.2	2.4	2.6	2.8
18	1.2	1.4	1.5	1.7	1.3	1.5	2.2	1.9	2.0	2.5	2.6	3.0
19	1.2	1.5	1.3	1.3	1.8	1.4	2.1	1.7	2.1	2.6	2.9	3.2
20	1.3	1.5	1.5	1.4	1.4	1.7	2.3	2.2	2.3	3.1	2.6	3.1
21	1.2	1.2	1.2	1.4	1.5	1.4	2.3	1.8	2.2	2.5	2.6	3.0
22	2.2	1.8	1.6	1.6	1.6	2.2	2.5	1.9	2.2	2.6	3.0	3.1
23	1.8	1.6	1.4	1.3	1.5	1.6	2.2	1.9	2.4	2.6	3.0	2.9
24	1.7	1.4	1.4	1.8	1.6	1.7	2.4	2.0	2.6	2.6	2.8	3.0
25	1.4	1.8	1.8	1.4	2.2	1.5	2.3	2.0	2.4	3.0	3.0	3.1
26	1.3	1.8	1.6	1.8	1.9	2.1	2.5	1.9	2.3	2.9	2.9	5.5
27	2.0	1.6	1.9	1.6	1.6	1.7	2.4	2.2	2.8	2.8	2.9	3.2
28	2.0	2.2	1.7	1.9	1.9	1.8	2.3	1.9	2.4	2.7	2.7	3.1
29	1.9	1.6	1.6	1.5	1.7	1.4	2.1	1.9	2.2	2.6	2.6	2.8
30	1.5	1.4	2.0	1.6	1.6	1.8	2.4	1.8	2.3	2.6	2.9	3.0
Count	30	30	30	30	30	30	30	29	30	28	28	29
Median	1.6	1.6	1.5	1.5	1.6	1.6	2.2	1.9	2.2	2.6	2.7	3.0
Mean	1.6	1.6	1.5	1.6	1.6	1.6	2.2	2.0	2.4	2.6	2.8	3.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic: f min  
Unit : Mc  
Month : September 1960

TABLE 28—*contd.*  
Ionospheric Data  
75° E Mean Time

Latitude: 10° 2' N  
Longitude: 77° 5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
3.0	3.0	2.9	2.5	2.2	2.0	1.8	1.5	1.5	1.8	1.8	1.6	1
3.6	4.0	2.3	2.2	1.7	2.2	1.3	1.6	1.5	1.6	1.4	1.9	2
4.4	4.4	2.8	2.2	2.5	1.9	1.5	1.5	1.8	1.8	1.9	1.9	3
3.3	2.8	2.8	2.7	3.4	2.3	1.8	1.7	2.2	1.8	2.0	2.3	4
2.7	2.8	2.6	2.2	2.4	3.0	2.3	1.9	1.4	1.9	1.9	1.4	5
3.6	3.3	2.6	2.4	2.0	1.8	1.7	1.3	1.5	1.5	1.4	1.5	6
3.2	3.2	2.8	2.6	2.1	1.8	1.6	1.3	1.5	1.5	1.7	1.5	7
2.8	2.8	2.8	2.6	2.2	2.0	1.4	1.7	1.5	2.0	1.6	2.4	8
2.9	2.7	2.8	2.5	2.2	1.8	1.6	1.5	1.6	1.4	1.4	1.4	9
3.0	3.0	2.8	2.6	2.4	2.1	1.6	1.3	1.5	1.1	1.6	1.4	10
C	C	2.8	2.8	2.4	1.9	1.8	1.5	1.5	1.7	1.6	1.2	11
2.8	3.2	2.8	2.6	2.4	2.2	1.8	1.7	1.7	2.0	1.5	1.6	12
3.0	3.2	3.0	2.8	2.4	2.6	1.8	1.5	1.5	1.5	1.0	1.3	13
3.1	3.2	3.0	C	2.3	2.2	1.6	1.7	1.5	1.5	1.8	1.4	14
3.2	3.1	3.0	3.0	2.6	2.4	1.7	1.5	1.6	1.4	1.4	1.5	15
3.1	3.0	2.4	3.0	2.3	2.2	1.5	1.2	1.4	1.5	1.4	1.4	16
3.1	3.1	2.5	3.0	2.1	2.2	1.9	1.4	1.4	1.3	1.5	1.4	17
3.0	2.9	2.8	2.7	2.0	2.3	1.6	C	1.3	1.3	1.4	1.3	18
3.5	4.8	3.0	2.8	2.4	2.8	1.7	1.7	1.4	1.5	1.4	1.5	19
3.1	3.2	2.6	2.8	2.3	2.3	1.6	1.5	1.6	1.5	1.5	1.5	20
3.2	3.0	2.8	2.4	1.8	2.8	2.2	1.6	1.7	1.9	1.9	1.4	21
3.2	2.6	2.8	2.5	2.3	2.8	1.7	1.6	1.7	1.8	1.7	1.4	22
3.0	2.8	2.4	2.5	2.6	2.4	1.8	1.6	1.4	1.9	2.0	1.6	23
3.2	3.2	3.0	3.0	2.3	2.6	1.8	1.4	1.5	1.6	1.9	1.4	24
3.2	3.0	3.0	2.8	2.6	2.6	1.7	1.9	1.7	1.8	1.3	1.4	25
4.5	3.1	3.0	2.5	2.3	2.6	2.2	1.8	1.9	2.1	2.2	1.6	26
3.1	2.0	3.0	2.7	2.6	2.6	1.7	1.6	1.9	1.8	1.6	1.9	27
2.9	3.9	2.3	2.5	2.5	2.6	1.7	1.2	1.3	1.7	1.9	1.6	28
3.0	3.0	2.5	2.1	1.7	1.9	2.0	1.8	1.7	1.6	1.6	1.6	29
3.1	3.0	3.0	2.6	2.1	2.6	2.2	1.9	2.0	1.9	1.8	1.9	30
29	29	30	29	30	30	30	29	30	30	30	30	Count
3.1	3.0	2.8	2.6	2.3	2.3	1.7	1.6	1.5	1.6	1.6	1.5	Median
3.2	3.1	2.8	2.6	2.3	2.3	1.8	1.6	1.6	1.7	1.7	1.6	Mean

Sweep 1.0 Mc, to 25.0 Mc, in 27 seconds,

Characteristic: f min  
Unit : Mc  
Month : September 1960

TABLE 28—*contd.*  
Ionospheric Data  
75° E Mean Time

Latitude: 10°2' N  
Longitude: 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	1.9	1.6	1.8	1.4	1.7	1.9	2.6	1.9	2.4	2.6	2.8	C
2	1.6	1.5	1.4	1.3	1.3	1.6	1.5	2.0	2.9	2.4	2.7	4.2
3	2.1	1.6	1.7	1.7	1.7	1.6	4.0	3.4	4.4	4.0	4.0	4.8
4	2.4	1.7	1.8	1.3	2.0	1.5	2.1	2.1	2.6	2.7	2.8	3.0
5	1.7	1.6	1.4	1.4	E	1.6	2.2	2.4	2.3	C	2.6	2.9
6	1.7	1.7	2.2	2.6	E	2.0	1.8	1.7	2.4	2.8	2.8	3.0a
7	1.3	1.5	1.8	1.7	1.6	1.9	1.8	2.0	2.4	2.9	2.8	3.0
8	1.1	1.4	1.5	1.5	1.4	1.9	C	1.7	2.1	2.4	2.8	2.8
9	ul.8s	1.7	1.4	1.3	1.5	1.6	1.8	1.7	2.2	2.4	2.5	2.8
10	1.1	1.7	1.5	1.6	1.5	1.7	1.7	1.8	2.3	2.8	2.7	3.0
11	1.1	1.0	1.1	1.5	1.5	1.5	1.7	2.0	2.2	C	C	C
12	1.1	1.3	1.5	1.5	1.4	1.7	1.7	1.8	2.4	2.4	2.8	2.8
13	1.8	1.8	1.6	1.6	1.6	1.8	1.8	1.8	2.2	2.5	2.8	3.0
14	1.6	1.3	1.4	1.6	1.2	1.7	1.9	2.0	2.6	2.6	3.4	3.2
15	2.0	1.7	1.4	1.6	1.5	1.8	2.7	2.0	2.4	C	2.8	3.0
16	1.2	1.3	1.6	1.6	1.4	1.7	2.0	1.8	2.4	2.6	3.2	3.1
17	1.4	1.2	1.3	1.4	1.5	1.5	1.8	1.7	2.2	2.4	2.7	2.8
18	1.3	1.3	1.5	1.4	1.3	1.7	2.0	1.8	2.4	2.6	2.5	2.9
19	1.7	1.4	1.4	1.8	1.6	1.7	2.1	2.2	2.4	2.8	3.0	3.2
20	1.3	1.2	1.6	1.5	1.3	1.8	2.3	2.1	2.7	2.7	3.0	3.1
21	1.3	1.2	1.3	1.3	1.4	1.5	1.8	2.0	2.4	2.4	3.0	3.1
22	2.2	1.9	1.7	1.5	1.8	2.2	2.6	2.0	2.5	2.5	3.1	3.2
23	1.9	1.7	1.7	1.2	1.4	1.6	1.9	2.0	2.4	2.6	2.8	3.2
24	1.6	1.5	1.6	1.7	1.5	1.6	1.9	2.0	2.6	2.4	3.0	3.0
25	1.3	1.9	1.6	1.5	1.4	1.7	1.9	2.4	2.8	3.0	3.0	3.2
26	1.6	1.6	1.7	1.8	2.2	2.1	2.6	2.2	2.5	3.0	3.4	4.8
27	1.7	2.1	1.7	1.7	1.7	1.7	2.9	2.4	2.6	2.9	2.9	3.0
28	2.1	1.5	1.9	1.6	1.8	2.1	2.6	2.1	2.5	2.6	3.0	3.1
29	1.8	1.6	1.5	1.6	1.6	1.7	1.9	1.9	2.3	2.5	3.2	3.0
30	1.5	1.6	1.6	1.6	2.2	1.6	2.4	2.2	2.5	2.7	3.0	3.2
Count	30	30	30	30	30	30	30	30	30	27	29	28
Median	1.6	1.6	1.6	1.6	1.5	1.7	1.9	2.0	2.4	2.6	2.8	3.0
Mean	1.6	1.5	1.6	1.6	1.6	1.7	2.1	2.0	2.5	2.7	2.9	3.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic: f min

Unit : Mc

Month : September 1960

TABLE 28—*contd.*

Ionospheric Data

75° E Mean Time

Latitude: 10.2° N

Longitude: 77.5° E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.9	2.8	2.6	2.6	2.2	2.2	1.4	1.5	1.6	1.8	1.5	1.7	1
5.0	2.7	2.3	1.8	1.6	1.6	1.3	1.7	1.7	1.8	1.8	2.2	2
4.6	3.2	2.4	2.6	2.2	1.8	2.0	1.5	2.2	1.9	2.0	2.0	3
2.9	2.6	3.1	2.6	3.0	2.4	1.6	1.7	1.9	1.9	2.2	1.8	4
2.7	3.0	2.3	3.5	3.0	2.6	1.9	1.5	1.9	1.8	1.8	2.0	5
3.4	3.1	2.8	2.3	1.8	1.8	1.3	1.5	1.6	1.8	1.5	1.2	6
3.0	3.0	2.8	2.4	2.1	2.2	1.2	1.3	1.5	1.4	1.2	1.1	7
2.9	2.8	2.9	2.4	2.3	1.7	1.5	1.4	2.2	1.7	1.6	1.8	8
3.0	2.8	2.6	2.4	2.1	2.4	1.3	1.6	1.5	1.3	1.7	1.3	9
3.0	2.9	3.0	2.4	1.8	2.4	1.2	1.3	1.6	1.4	1.6	1.2	10
C	2.9	2.8	2.6	2.4	2.2	1.4	1.5	1.4	1.7	1.4	1.3	11
2.8	2.8	2.8	2.3	2.5	2.4	1.5	1.5	C	1.6	1.7	1.8	12
3.0	3.0	3.0	2.4	2.0	2.2	1.4	1.5	1.5	1.6	1.2	1.4	13
3.2	3.8	3.0	C	C	2.2	1.7	1.8	1.5	1.8	1.5	1.7	14
3.0	3.0	2.8	2.7	2.4	1.9	1.4	1.4	1.4	1.5	1.1	1.5	15
2.9	2.8	3.0	2.5	2.2	2.1	1.2	1.4	1.3	1.3	1.4	1.5	16
3.1	2.8	2.5	2.9	2.1	2.4	1.5	1.5	1.4	1.3	1.2	1.2	17
2.9	2.8	2.8	2.2	2.2	2.2	1.9	1.3	1.3	1.3	1.4	1.3	18
5.5	3.4	3.0	2.8	2.4	2.4	1.3	1.5	1.3	1.6	1.3	1.5	19
3.0	3.0	3.0	2.5	2.2	2.3	2.4	1.7	1.3	1.4	1.5	1.4	20
3.1	2.9	3.0	2.1	3.0	2.3	1.9	1.3	1.7	1.6	1.3	1.9	21
3.3	2.5	3.0	2.4	2.4	2.4	1.9	1.8	1.7	2.0	1.3	1.5	22
3.0	2.9	3.0	2.8	2.5	2.6	1.9	1.6	1.8	1.6	1.9	1.8	23
3.2	3.0	3.4	2.6	2.6	2.8	1.4	1.6	1.6	1.8	1.4	1.4	24
3.2	3.0	2.8	2.8	3.0	2.2	1.5	1.9	1.9	1.9	1.9	1.8	25
3.6	3.0	2.9	2.6	3.0	2.6	1.8	1.7	1.8	2.0	1.6	1.8	26
3.1	3.1	3.0	2.8	3.0	2.4	1.6	1.9	1.8	1.6	1.6	2.2	27
3.0	2.7	2.7	2.5	2.2	2.1	1.3	1.6	1.3	1.8	1.7	1.9	28
2.8	2.9	2.9	1.9	1.6	2.5	1.4	1.8	1.6	1.5	1.3	1.7	29
3.2	2.8	2.8	2.5	2.9	2.1	1.7	1.5	1.7	1.8	1.9	2.3	30
29	30	30	29	29	30	30	30	29	30	30	30	Count
3.0	2.9	2.8	2.5	2.3	2.2	1.5	1.5	1.6	1.6	1.5	1.7	Median
3.2	2.9	2.8	2.5	2.4	2.2	1.6	1.6	1.6	1.6	1.6	1.6	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

514

Characteristic : h'F<sub>2</sub>

TABLE 29

Latitude: 10° 2' N

Unit : Km.

Ionospheric Data

Longitude: 77° 5' E

Month : September 1960

75°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	C	L
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	C	C	C
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	C	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
Count								..	..	..	..	..
Median								..	..	..	..	..
Mean								..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc, in 27 seconds,

514

Characteristic : h'F<sub>2</sub>

Unit : Km

Month : September 1960

TABLE 29

Ionospheric Data

75°E Mean Time

Latitude: 10°2' N

Longitude: 77°5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	L	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
												5
L	L	L	L	L	L							6
L	L	L	L	L	L							7
L	L	L	L	L	L							8
L	L	L	L	L	L							9
												10
C	C	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
												15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
												20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
												25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
												30
												Count
												Median
												Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 Seconds.



Characteristic : h'F<sub>2</sub>TABLE 29—*contd.*

Latitude: 10°2' N

Unit : Km

Ionospheric Data

Longitude: 77°5' E

Month : September 1960

75°E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							L	L	L	L	L	C
2							L	L	L	L	u <sub>310</sub> L	L
3							L	L	L	L	L	L
4							L	L	L	L	L	L
5							..	L	L	C	L	L
6							..	L	L	L	L	L
7							..	L	L	L	L	L
8							C	L	L	L <sub>H</sub>	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11							..	L	L	C	C	C
12							..	L	L	L	L	L
13							..	L	L	L	L	L
14							..	L	L	L	L	L
15							..	L	L	C	L	L
16							L	L	L	L	L	L
17							..	L	L	L	L	L
18							..	L	L	L	L	L
19							L	L	L	L	L	L
20							L	L	L	L	L	L
21							..	L	L	L	L	L
22							..	L	L	L	L	L
23							..	L	L	L	L	L
24							L	L	L	L	L	L
25							L	L	L	L	L	L
26							..	L	L	L	L	L
27							..	L	L	L	L	L
28							..	L	L	L	L	L
29							L	L	L	L	L	L
30							L	L	L	L	L	L
Count							..	..	..	..	I	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F<sub>2</sub>TABLE 29—*contd.*

Latitude: 10° 2' N.

Unit : Km

Ionospheric Data

Longitude: 77° 5' E.

Month : September 1960

75 E Mean Time

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L	L								1
L	L	L	A	A								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	..								5
L	L	L	L	L								6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
G	L	L	L	L								11
L	L	L	L	L								12
L	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	L	L	..								16
L	L	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	..								25
L	L	L	L	L								26
L	L	L	L	..								27
L	L	L	L	L								28
L	L	L	L	L								29
L	L	L	L	L								30
..	..	..	..	..								Count
..	..	..	..	..								Median
..	..	..	..	..								Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F<sup>2</sup>

Unit : Km

Month : September 1960

TABLE 30  
Ionospheric Data

75° E Mean Time

Latitude : 10° 2' N

Longitude : 77° 5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	235	220	220	240	245	225	260	240	220	215	200H	200
2	280	240	220	230	225	230	260	240	230B	200H	205	220
3	280F	265	240	220	225	260	270	265B	270B	250B	240	B
4	245	235	245	A	250	220	260	245	230	210	210	195
5	240	225	225	280	295	E	270	250	240	240	C	210
6	275	280A	260	265	270	E	265	245	230	225	220	205
7	250	240	235	240	235	E	260	240	220H	200	205H	200
8	280	260	265	260	240	220	250	C	220H	210	200	200
9	300	260	255	240	240	220	265	240H	220H	205H	210	200
10	270	275	245	235	230	225	250	240	220	205H	200	200
11	300	320	340	280	220	210	260	240	210	C	C	C
12	270	285	260	220	220	240	265	240	220	210	200H	200
13	260	240	240	240	260	240	260	240	220	220	220	220
14	270	240	260	240	240	235	260	250	230	220	200	205
15	220	240	260	260	260	240	270	240	230	C	205	200
16	250F	240F	235	255F	235F	230F	265	245	225	205	200	205
17	255F	240F	240	240	235	220	260	245	225	200	200H	190H
18	270F	255F	240F	235F	260F	260	275	260	220	200	215	205
19	250F	235F	240	240	240F	230F	275	250	220	220	210	215
20	230F	230F	235	240F	240F	245F	270	245	230	220	220	220
21	240	225	240	225	230	230	265	245	230	215	200H	210
22	250	235	240	235	240	225	260	240	225	215	200H	215
23	265	240	225	240	230	240	270	250	225	215	215	200
24	240	225	220	220	230	240	250	245	230	225	220	215
25	285	255	225	230	230	220	255	240	220	215	210	205
26	240	240	240	245	240	240	260	250	220	210	200	B
27	250	240	250	250	240	235	270	250	230H	230	220	220
28	250	240	260	280	260	235	260	245	225	220	220	210
29	255	255	255	245	230	220	265	240	240	220	200	220
30	240	245	255	245	240	255	270	250	235	220	220	210
Count	30	30	30	29	30	30	30	29	30	28	28	27
Median	250	240	240	240	240	235	260	245	225	215	210	205
Mean	260	250	245	245	240	235	265	245	225	215	210	205

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km.

Month : September 1960

TABLE 30  
Ionospheric Data  
75° E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
200 <sub>H</sub>	200 <sub>H</sub>	215	220	230	240	280	F	260 <sub>F</sub>	300 <sub>F</sub>	290 <sub>F</sub>	300 <sub>F</sub>	1
220	220	230	A	A	A	280	370	400	320	300	280 <sub>F</sub>	3
u230 <sub>B</sub>	B	u250 <sub>A</sub>	A	260	270	300	305	300	265	260	260	3
200	210	215	A	245	265	305	340	280	245	225	260	4
225	220	220	230	245	270	280	260	260	240	235	285	5
210	205	220	230	235	250	285	F	F	u300 <sub>F</sub>	u280 <sub>F</sub>	u280 <sub>A</sub>	6
200	205	200	220	225	245	280	320	F	300	260	280	7
200 <sub>H</sub>	205 <sub>H</sub>	215	225	240	A	300	390	350	280	300	300	8
205	205	210	220	240	260	300	420 <sub>F</sub>	F	u320 <sub>F</sub>	290	280	9
195	205	220	220	235	260 <sub>H</sub>	300	F	F	F	u285 <sub>F</sub>	u280 <sub>F</sub>	10
C	C	220	220	230	260	310	380 <sub>F</sub>	u380 <sub>F</sub>	u280 <sub>F</sub>	u300 <sub>F</sub>	260	11
200	220	220	220	240	260	320	u440 <sub>F</sub>	u400 <sub>F</sub>	u300 <sub>F</sub>	240	260	12
220	210	220	220	240	260	320	u400 <sub>F</sub>	u360 <sub>F</sub>	300	260	280	13
200	200 <sub>H</sub>	210	C	240	265	320	u480 <sub>F</sub>	u340 <sub>F</sub>	340	280	240	14
200	220	240	220	240	270	320	u400 <sub>F</sub>	u420 <sub>F</sub>	u360 <sub>F</sub>	300 <sub>F</sub>	320	15
215	210	215	225	240	260	310	u480 <sub>F</sub>	F	F	u270 <sub>F</sub>	u245 <sub>F</sub>	16
210	200	210	230	235	260	310 <sub>F</sub>	F	F	u280 <sub>F</sub>	u280 <sub>F</sub>	u240 <sub>F</sub>	17
205	200	225	225	240	270	315	C	F	F	u370 <sub>F</sub>	u270 <sub>F</sub>	18
215	E	235	A	250	275	335	F	F	F	u275 <sub>F</sub>	u255 <sub>H</sub>	19
220	220	220	230	240	275	330	F	F	F	u330 <sub>F</sub>	u350 <sub>F</sub>	20
205	215	210	220	235	265	315	440	F	370	300	u270 <sub>A</sub>	21
210	210	210 <sub>H</sub>	225	240	265	320	F	u400 <sub>F</sub>	365 <sub>F</sub>	280 <sub>F</sub>	300 <sub>F</sub>	22
210	205	215	220	240	265	325	u420 <sub>F</sub>	460 <sub>F</sub>	F	305	280	23
210	210	210	220	245	275	335	430	410	340	300	290	24
210	210	220	215	240	265	320	F	465	330	300	265	25
u220 <sub>B</sub>	220	215	225	240	270	320	445	F	F	300	250	26
200	220	205	220	250	275	330	460	F	300	270	260	27
220	215	220	220	250	275	300	445	F	F	280	250 <sub>F</sub>	28
200 <sub>H</sub>	215	220	225	245	265	320	F	F	F	F	240	29
210	205	210 <sub>H</sub>	225	240	275	300	F	F	F	F	260	30
29	27	30	25	29	28	30	19	15	20	28	30	Count
210	210	220	220	240	265	310	420	380	300	280	270	Median
210	210	220	225	240	265	310	400	365	305	285	275	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km.

Month : September 1960

TABLE 30—*contd.*

Ionospheric Data

75°E Mean Time

Latitude 10°2'N

Longitude 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	230	220	240	240	240	300	250	230	215	210	200 <sub>H</sub>	C
2	260	230	225	220	230	240	240	220	220	220	200	230
3	270	250	250	220	240	280	260	260	260 <sub>B</sub>	250	230	B
4	240	240	260	270	245	240	250	250 <sub>A</sub>	220	205	205	205
5	220	230	245	275	E	335	260	250	235	C	220	220
6	A	275	260	275 <sub>H</sub>	E	300	255	235	225	225	215	205
7	240	220	245	240	260	300	245	220 <sub>H</sub>	210	215 <sub>H</sub>	200 <sub>H</sub>	215
8	270	260	275	240	220	240	C	230 <sub>H</sub>	215 <sub>H</sub>	200	200	200 <sub>H</sub>
9	270	260	245	235	225	240	255	225	205 <sub>H</sub>	220 <sub>H</sub>	205	205
10	270	260	230	225	220	230	250	225 <sub>H</sub>	205 <sub>H</sub>	205 <sub>H</sub>	200 <sub>H</sub>	195
11	320	340	320	260	220	230	240	220	200 <sub>H</sub>	C	C	C
12	280	280	240	220	220	260	260	230	205	200 <sub>H</sub>	200	200
13	240	240	240	260	260	240	250	230	220	215	205	220
14	260	240	240	240	235	240	260	240	220	200	210	200
15	225	240	260	240	240	260	260	240	220	C	210	205
16	250 <sub>F</sub>	235	250 <sub>F</sub>	245 <sub>F</sub>	230 <sub>F</sub>	250 <sub>F</sub>	250	230	215	200	200	210
17	250 <sub>F</sub>	235	240	235	235	240	255	235	220	200 <sub>H</sub>	190 <sub>H</sub>	210
18	275 <sub>F</sub>	230 <sub>F</sub>	230 <sub>F</sub>	240	270 <sub>F</sub>	270	260	240	220	215	205	200
19	235 <sub>F</sub>	240 <sub>F</sub>	240 <sub>F</sub>	260 <sub>F</sub>	235 <sub>F</sub>	250 <sub>F</sub>	260	240	220	215	210	205
20	230	235 <sub>F</sub>	240 <sub>F</sub>	240 <sub>F</sub>	245 <sub>F</sub>	260 <sub>F</sub>	260	240	225	225	220	220
21	240	235	240	230	230	270	255	230	225	210	200 <sub>H</sub>	205
22	240	240	240	230	235	240	250	235	220	200	215 <sub>H</sub>	215
23	255	230	235	235	235	255	255	230	220	210	210	205
24	235	220	225	220	240	265	245	235	230	220	220	210
25	275	230	225	235	225	235	245	225	225	220	210	205
26	240	245	255	240	240	240	250	235	205	205	200	B
27	240	235	260	250	225	255	255	240	225	220	220	220
28	240	245	270	270	245	250	260	230	220	220	225	215
29	250	255	250	240	235	240	250	240	235	210	220	215
30	240	240	250	240	255	260	260	250	230	220	215 <sub>H</sub>	205
Count	29	30	30	30	30	30	29	30	30	27	29	26
Median	240	240	240	240	235	250	255	235	220	215	210	205
Mean	250	245	250	240	235	255	255	235	220	215	210	210

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km.

Month : September 1960

TABLE 30—*contd.*

Ionospheric Data

75°E Mean Time

Latitude 10° 2' N

Longitude 77° 5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
210	A	215	230	240	270	300 <sub>F</sub>	260 <sub>F</sub>	280 <sub>F</sub>	300 <sub>F</sub>	300 <sub>F</sub>	280	1
B	220	240	A	A	280	320	400	300 <sub>F</sub>	300	300	260 <sub>F</sub>	2
u240 <sub>B</sub>	230	A	A	260	275	300	300	280	260	260	260	3
205	215	A	240	260	280	355	305	260	225	225	260	4
220	220	230	235	260	280	280	250	260	225	260	290	5
205	220	235	230	245	265	320	F	F	u300 <sub>F</sub>	A	260	6
205	200	210	230	240	270	320	u320 <sub>F</sub>	u320 <sub>F</sub>	280	280	300	7
200	210	220	220 <sub>H</sub>	A	A	330	370	300	280	300	300	8
210	210	220	230	260	280	360	F	F	280	u275 <sub>F</sub>	260	9
195	205	210	225	240	275	340	F	F	u245 <sub>F</sub>	u280 <sub>F</sub>	280	10
C	220	220	225	240	280	375	u400 <sub>F</sub>	u380 <sub>F</sub>	260 <sub>F</sub>	270	260	11
200	220	220	225	240	285	400	u420 <sub>F</sub>	C	250	260	260	12
210	220	220	230	245	280	400	u380 <sub>F</sub>	u360 <sub>F</sub>	300	280	280	13
200	220	220	C	C	280	400	u440 <sub>F</sub>	u300 <sub>F</sub>	310	250	240	14
220	210	225	230	250	300	395	u500 <sub>F</sub>	u320 <sub>F</sub>	400 <sub>F</sub>	300	u260 <sub>F</sub>	15
215	210	225	235	255	280	400	F	F	F	225 <sub>F</sub>	u260 <sub>F</sub>	16
200	210	225	230	245	280	u390 <sub>F</sub>	F	F	u360 <sub>F</sub>	u270 <sub>F</sub>	u260 <sub>F</sub>	17
210	220	235	235	250	280	400	F	u380 <sub>F</sub>	u320 <sub>F</sub>	F	255	18
B	225	A	250	260	295	u440 <sub>F</sub>	F	F	F	F	u245 <sub>F</sub>	19
220	220	220	230	255	290	415	F	F	F	u330 <sub>F</sub>	280	20
205	210	215	220	250	285	400	F	420 <sub>F</sub>	320	280	250	21
210	215	220	230	250	290	395	F	u400 <sub>F</sub>	300	315 <sub>F</sub>	290 <sub>F</sub>	22
205	215	215	230	250	295	405	u410 <sub>F</sub>	400	F	300	250	23
205	215	225	235	260	300	405	420	405 <sub>F</sub>	330	265	290	24
215	215	215	230	250	280	410	520	F	300	300	260	25
215	215	220	230	250	280	400	470	F	F	260	250	26
215	210	220	225	260	290	400	F	F	295	260	260	27
205	210	220	240	260	285	385	F	F	F	u240 <sub>F</sub>	240	28
215	220	220	215	260	290	400	F	F	u335 <sub>F</sub>	240	240	29
210	220	225	240	260	280	u365 <sub>F</sub>	F	F	F	F	240	30
27	29	27	27	27	29	30	16	16	23	26	30	Count
210	215	220	230	250	280	395	400	320	300	270	260	Median
210	215	220	230	250	285	375	385	335	295	275	265	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km.

Month : September 1960

TABLE 31  
Ionospheric Data  
75°E Mean Time

Latitude 10°2' N  
Longitude 77°5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								120	110	110	A	A
2								120	B	A	A	B
3								B	B	B	B	B
4							135	A	A	A	A	A
5							..	115	A	A	C	A
6							..	120	115	120	A	A
7							130	115	120	120	A	A
8								C	120	120	120	A
9								120	120	A	A	A
10								120	110	110	A	A
11								120	A	C	C	C
12								120	110	110	A	A
13								120	110	A	A	A
14								120	110	A	A	A
15								120	120	C	A	A
16								A	A	A	A	A
17								115	A	A	A	A
18								A	A	A	A	A
19								A	A	A	A	A
20								120	A	A	A	A
21								115	110	A	A	A
22								115	105	A	A	A
23								115	110	A	A	A
24								120	115	A	A	A
25								115	A	A	A	A
26								120	A	A	A	B
27								120	110	A	A	A
28								A	A	A	A	A
29								115	A	A	A	A
30								A	120	A	A	A
Count							2	22	16	6	1	..
Median							..	120	110	115	..	..
Mean							..	120	115	115	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h' E

Unit : Km

Month : September 1960

TABLE 31  
Ionospheric Data  
75°E Mean Time

Latitude 10°2'N

Longitude 77°5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	120	120	120	A							11
A	B	A	A	A	A							12
B	B	A	A	A	A							13
A	A	A	A	B	A							14
A	A	105	A	120	...							15
120	120	120	120	120	120							16
A	A	120	120	115	120							17
120	A	120	120	115	A							18
A	A	A	120	A	A							19
A	A	A	120	120	120							20
C	C	120	120	120	120							21
A	A	120	120	120	A							22
A	A	120	120	120	A							23
A	A	120	C	120	120							24
A	A	120	120	120	A							25
A	A	A	A	A	..							26
A	A	A	A	120	..							27
A	A	A	A	A	..							28
A	B	A	A	A	..							29
A	A	A	A	A	A							30
A	A	A	A	A	..							31
A	A	A	A	A	..							32
A	A	A	A	A	A							33
A	A	A	A	A	A							34
A	A	A	A	A	A							35
A	A	A	A	A	A							36
A	A	A	A	A	A							37
A	A	A	A	A	A							38
A	A	A	A	A	A							39
A	A	A	A	A	A							40
A	A	A	A	A	A							41
A	A	A	A	A	A							42
A	A	A	A	A	A							43
A	A	A	A	A	A							44
A	A	A	A	A	A							45
A	A	A	A	A	A							46
A	A	A	A	A	A							47
A	A	A	A	A	A							48
A	A	A	A	A	A							49
A	A	A	A	A	A							50
A	A	A	A	A	A							51
A	A	A	A	A	A							52
A	A	A	A	A	A							53
A	A	A	A	A	A							54
A	A	A	A	A	A							55
A	A	A	A	A	A							56
A	A	A	A	A	A							57
A	A	A	A	A	A							58
A	A	A	A	A	A							59
A	A	A	A	A	A							60
A	A	A	A	A	A							61
A	A	A	A	A	A							62
A	A	A	A	A	A							63
A	A	A	A	A	A							64
A	A	A	A	A	A							65
A	A	A	A	A	A							66
A	A	A	A	A	A							67
A	A	A	A	A	A							68
A	A	A	A	A	A							69
A	A	A	A	A	A							70
A	A	A	A	A	A							71
A	A	A	A	A	A							72
A	A	A	A	A	A							73
A	A	A	A	A	A							74
A	A	A	A	A	A							75
A	A	A	A	A	A							76
A	A	A	A	A	A							77
A	A	A	A	A	A							78
A	A	A	A	A	A							79
A	A	A	A	A	A							80
A	A	A	A	A	A							81
A	A	A	A	A	A							82
A	A	A	A	A	A							83
A	A	A	A	A	A							84
A	A	A	A	A	A							85
A	A	A	A	A	A							86
A	A	A	A	A	A							87
A	A	A	A	A	A							88
A	A	A	A	A	A							89
A	A	A	A	A	A							90
A	A	A	A	A	A							91
A	A	A	A	A	A							92
A	A	A	A	A	A							93
A	A	A	A	A	A							94
A	A	A	A	A	A							95
A	A	A	A	A	A							96
A	A	A	A	A	A							97
A	A	A	A	A	A							98
A	A	A	A	A	A							99
A	A	A	A	A	A							100
2	1	10	11	13	5							Count
..	..	120	120	120	120							Median
..	..	120	120	120	120							Mean



Characteristic : h'E

TABLE 31—*contd.*

Latitude 10° 2' N

Unit : Km.

Ionospheric Data

Longitude 77° 5' E

Month : September 1960

75°E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							..	110	A	A	A	C
2							120	110	A	110	A	B
3							B	A	B	B	B	B
4							125	A	A	A	A	A
5							—	115	A	C	A	A
6							120	115	A	120	A	120
7							120	120	120	A	115	A
8							C	120	120	110	A	A
9							120	115	120	A	A	A
10							120	110	110	A	A	A
11							120	120	120	C	C	C
12							120	120	110	A	A	A
13							120	115	A	A	A	A
14							120	115	A	A	A	A
15							..	120	A	C	A	A
16							120	A	A	A	A	A
17							120	A	A	A	A	A
18							120	A	A	A	A	A
19							A	A	A	A	A	A
20							145	A	A	A	A	A
21							120	115	110	A	A	A
22							..	110	A	A	A	A
23							120	110	A	A	A	A
24							115	115	110	A	A	A
25							120	120	A	A	A	A
26							..	A	A	A	B	B
27							..	115	A	A	A	A
28							..	A	A	A	A	A
29							125	A	A	A	A	A
30							110	A	A	A	A	A
Count							20	19	8	3	1	1
Median							120	115	115	..	..	..
Mean							120	115	115	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km.

Month : September 1960

TABLE 31—*contd.*

Ionospheric Data

75°E Mean Time

Latitude 10°2' N

Longitude 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	120	120	A								1
B	A	A	A	A								2
B	120	A	A	A								3
A	A	A	A	A								4
A	A	A	B	...								5
120	120	120	120	120	145							6
A	A	120	120	120	...							7
120	A	120	120	A	A							8
A	A	120	120	A								9
A	A	120	120	A								10
C	120	120	120	120								11
110	A	120	A	120								12
A	A	120	120	A								13
110	B	A	C	C								14
A	A	120	120	120								15
A	A	A	A	A								16
A	A	A	120	A								17
A	A	A	A	A								18
B	A	A	A	...								19
A	A	A	A	A								20
A	A	A	A	...								21
A	A	120	A	A								22
A	A	110	120	A								23
A	A	A	A	A								24
A	A	A	A	...								25
A	A	A	A	...								26
A	A	A	A	...								27
A	A	A	A	A								28
A	A	A	A	A								29
A	A	A	A	...								30
4	3	12	11	5	1							Count
..	..	120	120	120	..							Median
..	..	120	120	120	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic:  $f^oF_2$ 

TABLE 32

Unit: Km.

Ionospheric Data

Month: September 1960

75°E Mean Time

Latitude 10°2' N

Longitude 77°5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								110	100	100	100	100
2								105	100	100	100	100
3								G	110	100	100	100
4				110			G	105	100	100	100	100
5								G	100	100	C	100
6	125	120	120	120	120	..	..	115	100	100	100	100
7	120	..	..	120	..	..	G	110	100	100	100	100
8	..							C	100	100	100	100
9	125							G	100	100	100	100
10	..							G	100	100	100	100
11	105	120	120	115	..	125		105	105	C	C	C
12	115	105	100	..	..			105	100	100	100	100
13	120	120	..	115				110	100	100	100	100
14								G	100	100	100	100
15								110	100	C	100	100
16								105	100	100	100	100
17								G	100	100	100	100
18	110							100	100	100	100	100
19				120				105	100	100	100	100
20								G	100	100	100	100
21								105	100	100	100	100
22								105	100	100	100	100
23								105	100	100	100	100
24								G	G	100	100	100
25								G	100	100	100	100
26								125	100	100	100	100
27								G	100	100	100	100
28								100	100	100	100	100
29	135							110	110	100	100	100
30					120			100	G	100	100	100

Count	8	4	3	6	2	1	..	19	28	28	28	29
Median	120	..	..	120	..	..	..	105	100	100	100	100
Mean	120	..	..	115	..	..	..	105	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km.

Month : September 1960

TABLE 32.11

Ionospheric Data

75°E. Mean Time

Latitude 10°2' N

Longitude 77°5'E

Observations : 14

12	13	14	15	16	17	18	19	20	21	22	23	Date
100	100	100	100	105	115						120	11
100	100	100	100	100	100	100			135	130	130	12
100	110	100	100	100	100	110		140	100	120	130	13
100	100	100	100	G	100	..	..	..	..	..	..	14
100	100	100	100	100	..	..	..	100	..	..	110	15
100	100	100	105	115	120					120	120	16
100	100	100	100	100	115					..	..	17
100	100	100	105	110	100	100			125	100	150	18
100	100	100	100	100	100	100					..	19
100	100	100	100	100	100	100					..	20
C	C	100	100	110	115						115	21
100	100	100	100	115	120					120	130	22
100	100	100	105	110	120					120	120	23
100	100	100	C	100	110						..	24
100	100	100	105	110	120						..	25
100	100	100	100	100	110							26
100	100	100	100	100	115							27
100	100	100	100	100	100		C					28
100	110	110	110	110	110							29
100	100	100	100	110	115							30
100	100	100	100	100	100				155	120	110	21
100	100	100	100	100	110						110	22
100	100	100	100	100	100						125	23
100	100	100	100	100	100						125	24
100	100	100	100	105	100						..	25
100	100	100	100	110	..							26
100	100	100	110	100	..							27
100	100	100	100	100	120				130	120	130	28
100	100	100	100	100	100						115	29
100	100	100	100	100	..						..	30
29	29	30	29	29	24	3	..	2	5	8	14	Count
100	100	100	100	100	110	..	..	..	130	120	120	Median
100	100	100	100	105	110	..	..	..	130	120	120	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E<sub>s</sub>

Unit : Km.

Month : September 1960

TABLE 32—*contd.*

Ionospheric Data

75°E Mean Time

Latitude 10°2' N

Longitude 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							..	105	100	100	100	C
2							G	100	100	100	100	100
3		130					G	110	100	100	100	100
4				110	..		105	100	100	100	100	100
5				..			..	G	100	C	100	100
6	120	120	120	120			G	110	100	100	100	100
7	..		120				G	105	100	100	100	100
8	..						C	100	100	100	100	100
9	130						G	105	100	100	100	100
10	..						G	105	100	100	100	100
11	105	120	105	100			110	100	100	C	C	C
12	110	105					G	105	100	100	100	100
13	..						G	100	100	100	100	100
14	120						G	100	100	100	100	100
15							..	100	100	C	100	100
16							G	100	100	100	100	100
17							G	100	100	100	100	100
18				105	105		125	100	100	100	100	100
19							110	105	100	100	100	100
20							G	100	100	100	100	100
21							G	105	100	100	100	100
22							..	105	100	100	100	100
23							G	100	100	100	100	100
24							G	105	105	100	100	100
25	.. 110						G	105	100	100	100	100
26							..	100	100	100	100	100
27							..	G	100	100	100	100
28							..	100	100	100	100	100
29							G	110	110	100	100	100
30	135						110	100	100	100	100	100
Count	7	4	3	4	1		5	28	30	27	29	28
Median	120	..	..	..	..		110	100	100	100	100	100
Mean	120	..	..	..	..		110	105	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

TABLE 32—*contd.*

Latitude 10° 2' N

Unit : Km.

Ionospheric Data

Longitude 77° 5' E

Month : September 1960

75°E Mean Time

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
100	100	100	100	110	..							1
100	100	100	100	100	100	100			130	130		2
G	110	100	100	100	100			140	140	..		3
100	100	100	100	100	..			..	..	..		4
100	100	100	100	..	..			115	..	..	120	5
100	100	105	105	115	120		140	..	..	120	125	6
100	100	100	100	115	120			..	..	120	..	7
100	100	100	110	100	100			140	100	100	125	8
100	100	100	100	100	120			..	..	..	..	9
100	100	100	100	100	..			..	..	..	..	10
C	100	100	110	115	..			120	..	..	140	11
100	100	100	100	120	120					..	135	12
100	100	105	110	100	120					120	120	13
100	100	100	C	C	120					..	..	14
100	100	100	105	120	..					120	..	15
100	100	100	100	110							..	16
100	100	100	G	100							105	17
100	100	100	100	100								18
105	110	115	110	120								19
100	100	100	105	110								20
100	100	100	100	100						120	..	21
100	100	100	100	100						125	110	22
100	100	100	100	100	100					..	..	23
100	100	100	100	100	100					125	..	24
100	100	100	105	105						..	..	25
100	100	100	100	..						..	..	26
100	100	100	110	120					130	135	..	27
100	100	100	100	115							140	28
100	100	100	100	100							..	29
100	100	100	100	115							120	30
28	30	30	28	27	10	1	1	4	4	10	10	Count
100	100	100	100	100	120	..	..	..	..	120	120	Median
100	100	100	100	105	110	..	..	..	..	120	125	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M3000)F2

Unit :

Month : September 1960

TABLE 33

Ionospheric Data

75°E Mean Time

Latitude: 10°2'N

Longitude: 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	3.10	3.20	3.25	3.05	3.20	3.40	3.10	3.05	2.65	2.30	2.40	2.40
2	2.75 <sub>F</sub>	F	F	3.40	3.40	3.35 <sub>H</sub>	3.25	3.10	2.70	2.30	2.50	2.50
3	2.90	3.00	3.15	3.20	3.20	3.20	3.10	3.20	2.95	2.60	2.25	2.15
4	3.05	3.10	3.00	2.90	3.05	3.20	3.10	3.10	2.70	2.20	2.40	2.40
5	3.05	3.25	3.20	3.00	3.05	E	2.90	2.95	2.60	2.20	C	2.35
6	3.10	3.00	3.00	3.20	3.20	E	3.00	2.90	2.50	2.40	u2.55 <sub>a</sub>	u2.30 <sub>a</sub>
7	3.20	3.30	3.30	3.40	3.50	E	3.00	3.00	2.60	2.30	2.50	2.30
8	3.00	3.10	3.00	2.95	3.15	3.50	3.10	C	2.70	u2.35 <sub>R</sub>	2.20	2.40
9	2.90	3.10	3.05	3.05	3.20	3.50	3.05	3.00	2.60	2.20 <sub>H</sub>	2.50	2.25
10	3.05	u3.15 <sub>F</sub>	u3.10 <sub>s</sub>	3.05	3.30	3.25	3.20	3.10	2.80	2.40	2.15	2.25
11	F	F	F	F	F	F	u2.90 <sub>F</sub>	2.70	2.40	C	C	C
12	F	F	2.95	3.15	3.40	3.10	3.00	2.80	2.40	2.30	2.30	2.20
13	2.90	3.10	F	2.95	2.90	3.20	3.05	2.80	2.40	2.45	2.30	2.30
14	2.75	2.90	F	3.10	3.00	3.15	3.20	3.10	2.75	2.20	2.25	2.25
15	3.05	3.10	3.00	3.00	3.00	3.30	2.95	2.90	2.60	C	2.20	2.15
16	F	F	u2.90 <sub>F</sub>	F	F	F	3.00	2.90	2.50	2.15	2.20	2.20
17	F	F	2.95	3.00	3.15	3.20	3.00	3.00	2.65	2.40	2.15	2.10
18	F	F	F	F	F	F	F	2.85 <sub>F</sub>	2.65	2.20	2.25	2.15
19	u3.05 <sub>F</sub>	F	u3.00 <sub>F</sub>	2.90 <sub>F</sub>	F	F	2.95	2.90	2.60	2.20	2.20	2.20
20	F	F	3.05 <sub>F</sub>	F	F	F	3.05	2.95	2.80	2.30	2.20	2.20
21	F	F	u3.10 <sub>F</sub>	3.15 <sub>F</sub>	3.15	3.30	3.00 <sub>F</sub>	2.95	2.65	2.25	2.20	2.20
22	F <sub>s</sub>	F	3.00	3.05	3.15	3.45 <sub>F</sub>	3.10	3.00	2.55	2.15	2.20	2.20
23	F	3.10 <sub>F</sub>	u3.15 <sub>F</sub>	u3.10 <sub>F</sub>	3.20	3.20	2.95	2.95	2.60	2.25	2.20	2.25
24	F	3.05	F	3.20	3.25	3.20	3.15	3.00	2.85	2.70	2.25	2.20
25	2.90	u3.15 <sub>F</sub>	F	F	3.20	3.35	3.00	3.10	2.80	2.50	2.10 <sub>H</sub>	2.20
26	F	u3.25 <sub>s</sub>	u3.15 <sub>s</sub>	F	3.10	3.20	u2.95 <sub>F</sub>	3.10	2.75	2.30	2.40	2.35
27	F	F	3.10 <sub>F</sub>	F	F	F	3.10	3.20	2.90	2.70	2.25	2.30
28	3.05	3.10	F	u3.10 <sub>F</sub>	3.10	F	u3.10 <sub>F</sub>	2.70	2.40	2.40	2.40	2.35
29	F	F	F	u2.95 <sub>F</sub>	F	F	3.20	2.95	2.60	2.30	2.35	2.30
30	F	u3.20 <sub>F</sub>	u2.90 <sub>F</sub>	3.00	3.15	3.10	3.10	3.00	2.60	2.35	2.30	2.40
Count	16	18	21	23	23	19	29	29	30	28	28	29
Median	3.05	3.10	3.05	3.05	3.15	3.20	3.05	3.00	2.60	2.30	2.25	2.25
Mean	3.00	3.10	3.05	3.10	3.15	3.25	3.05	2.95	2.65	2.35	2.30	2.25

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

53<sup>I</sup>Characteristic : (M3000)F<sub>2</sub>

TABLE 33

Latitude: 10° 2' N

Unit :

Ionospheric Data

Longitude: 77° 5' E

Month : September 1960

75° E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
2.40	2.40	2.50	2.60	2.60	2.50	2.40	F	F	F	F	F	1
2.40	2.35	2.40	2.50	2.55	2.70	2.65	u2.40s	F	F	2.70	F	2
2.25	2.50	2.45	2.55	2.65	2.65	2.60	2.55	2.80	2.90	u2.90s	3.00	3
2.15	2.35	2.45	2.50	2.50	2.55	2.40	2.30	2.60	2.95	2.85	2.95	4
2.30	2.10	2.25	2.50	2.60	2.70	2.70	2.80	2.85	2.95	2.80	2.85	5
2.45	2.40	2.40	2.30	2.25	j2.35s	u2.45s	2.40	u2.40s	u2.60s	u2.85s	3.00	6
2.40	2.30	2.30	2.30	2.30	2.40	2.40	2.40	2.55	2.70	2.85	2.90	7
2.25	2.15	2.20	2.30	2.40	2.45	2.45	2.30	2.40	u2.70s	2.80	2.90	8
2.20	2.30	2.25	2.30	2.30	2.40	u2.40s	2.05	F	F	F	F	9
2.20	2.20	2.25	2.25	2.40	2.40	2.30	2.10	u2.20F	F	F	F	10
C	C	2.15	2.15	2.25	2.25	2.15	2.00F	F	F	F	2.85F	11
2.20	2.15	2.25	2.35	2.35	2.30	2.20	F	F	F	F	F	12
2.30	2.20	2.20	2.25	2.30	2.30	2.15	F	F	F	F	F	13
2.30	2.25	2.20	C	u2.10s	u2.00s	2.00	F	F	u2.40F	2.60	2.90	14
2.15	2.15	2.15	2.20	2.15	2.05	1.95	1.90F	F	F	F	F	15
2.15	2.10	2.15	2.25	2.30	2.30	u2.15s	F	F	F	F	F	16
2.15	2.25	2.30	2.40	2.45	2.45H	2.25H	F	F	F	F	F	17
2.10	2.10	2.10	2.20	2.25	2.20	2.15	C	F	F	F	F	18
2.25	2.30	2.30	2.30	2.30H	2.10H	2.00H	F	F	F	F	F	19
2.20	2.10	2.10	2.20	2.10	2.05	2.00	F	F	F	F	F	20
2.15	2.20	2.20	2.20	2.20	2.30	2.15	2.00	2.15	F	F	u3.05F	21
2.20	2.25	2.25	2.30	2.30	2.30	2.15	1.90	F	F	F	F	22
2.10	2.15	2.20	2.35	2.40	2.40	2.15	S	F	F	F	F	23
2.20	2.15	2.25	2.30	2.30	2.30	2.15	2.00	F	F	F	F	24
2.30	2.20	2.25	2.25	2.30	2.20	2.10	j1.90F	F	F	F	F	25
2.30	2.25	2.25	2.35	2.40	2.45	2.40	u2.05F	F	F	F	F	26
2.35	2.25	2.30	2.35	2.40	2.35	2.30	2.05	F	F	F	2.95	27
2.35	2.30	2.30	2.30	u2.25s	2.30	2.15	2.00	F	F	F	F	28
2.20	2.30	2.40	u2.35s	2.30	u2.30s	2.20	F	F	F	F	3.10	29
2.30	2.40	2.45	2.40	2.40	2.30	u2.15R	u2.05F	F	F	F	F	30
29	29	30	29	30	30	30	19	8	7	8	11	Count
2.25	2.25	2.25	2.30	2.30	2.30	2.20	2.05	u2.50	u2.70	u2.85	2.95	Median
2.25	2.25	2.25	2.35	2.35	2.35	2.25	2.15	u2.50	u2.75	u2.80	2.95	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

53<sup>I</sup>



Characteristic : (M3000)F<sub>2</sub>

TABLE 33—Contd.

Latitude: 10°2'N

Unit :

Ionospheric Data

Longitude: 77°5'E

Month : September 1960

75° E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	3.20	3.20	3.20	3.15	3.30	2.75	3.10	2.85	2.50	2.35	2.40	C
2	F	F	3.35	3.35	3.35	2.80	3.20	2.90	2.45	2.30	2.50	2.40
3	F	3.10	3.00	3.35	3.35	2.80	3.20	2.65	2.80	2.45	2.05H	2.25
4	3.15	3.00	3.00	2.95	3.10	3.15	3.15	2.90	2.45	2.20	2.40	2.30
5	3.20	3.25	3.20	2.95	E	2.30	3.00	2.90	2.40	C	2.40	2.25
6	3.00	3.00	3.15	3.30	E	2.65	3.00	2.70	2.35	2.60	2.45	2.35
7	3.30	3.30	3.20	3.40	3.50	2.60	3.15	2.90	2.35	2.45	2.40	2.35
8	3.05	3.05s	2.90	3.00	3.40	2.80H	C	2.85	2.45	2.30	2.40	2.40
9	3.05	3.00	3.00	3.10	3.35	2.65H	3.15	2.85	2.30	2.40	2.35	2.25
10	3.00	FS	3.20F	3.15	3.35	3.30	3.15	3.00	2.60	2.15	2.30	2.20
11	F	F	F	F	F	F	3.2.85F	2.60	2.35	C	C	C
12	F	3.2.80s	3.05	3.25	3.20	3.15	3.3.00s	2.55	2.40	2.30	2.25	2.20
13	3.3.00s	3.3.10s	3.3.05Fs	2.90	3.10	3.30	3.00	2.60	2.45	2.35	2.40	2.30
14	F	3.00	3.10	3.15	3.15	3.25	3.20	2.90	2.50	2.20	2.25	2.25
15	3.10	2.90	2.90	F	3.20	2.65	3.00	2.80	2.45	C	2.20	2.15
16	F	3.3.05F	F	3.3.05F	F	F	3.00	2.70	2.25	2.25	2.20	2.15
17	3.2.75F	3.3.05F	3.00	3.3.05s	3.15	3.00	3.05	2.85	2.50	2.25	2.15	2.10
18	F	F	F	3.3.10F	F	F	F	2.70	2.40	2.25	2.25	2.10
19	F	3.3.00F	F	F	F	F	3.05	2.80	2.40	2.10	2.20	2.20
20	F	F	3.3.15F	F	F	3.2.70F	3.10	2.90	2.50	2.10	2.30	2.20
21	3.2.95F	3.3.05F	F	3.15	3.30	F	3.05	2.80	2.45	2.15	2.20	2.20
22	3.05	3.00	F	F	F	3.00	3.05	2.80	2.40	2.20	2.20	2.20
23	3.00	3.3.00s	F	3.15	3.10	3.00	3.05	2.75	2.45	2.10	2.20	2.20
24	F	3.3.05s	3.20	3.25	3.25	2.65	3.25	2.90	2.80	2.50	2.00H	2.25
25	2.95	FS	F	3.10	3.25	2.85	3.10	2.95	2.70	2.25	2.20	2.30
26	F	F	3.00	F	3.15	3.00	3.3.00F	3.00	2.60	2.20	2.30	2.35
27	F	F	3.05	F	3.3.20F	2.75	3.15	3.10	2.85	2.55	1.95H	2.30
28	3.10	3.10	F	3.00	F	3.3.15F	3.2.95F	2.55	2.40	2.45	2.35	2.35
29	3.3.10F	F	F	F	F	3.40	3.05	2.75	2.35	2.35	2.30	2.30
30	3.3.15F	3.00	F	3.05	3.15F	3.10	3.05	2.80	2.50	2.30	2.45	2.30
Count	18	21	19	22	20	25	28	30	30	27	29	28
Median	3.05	3.05	3.05	3.10	3.20	2.85	3.05	2.80	2.45	2.30	2.30	2.25
Mean	3.05	3.05	3.10	3.15	3.25	2.90	3.05	2.80	2.50	2.30	2.30	2.25

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M3000)F<sub>2</sub>

TABLE 33—Contd.

Latitude: 10°2'N

Unit :

Ionospheric Data

Longitude: 77°5'F

Month : September 1960

75° E Mean Time

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.40	2.45	2.60	2.60	2.55	2.45	F	F	F	F	F	2.70	1
2.40	2.35	2.50	2.55	2.65	2.65	2.55	2.40	2.55	F	2.75	F	2
2.35	2.50	2.50	2.60	2.65	u2.65 <sub>Q</sub>	2.55	2.60	2.80	2.90	u2.90 <sub>s</sub>	3.00	3
2.05	2.40	2.45	2.45	2.50	2.50	2.30	2.45	2.75	2.95	2.85	3.05	4
2.25	2.10	2.40	2.60	2.65	2.70	2.75	2.80	2.90	2.95	2.75	3.00	5
2.45	2.45	2.35	2.30	2.30	u2.40 <sub>s</sub>	2.40	2.35	S	2.70	2.90	3.05	6
2.35	2.35	2.30	2.30	2.30	2.45	2.35	2.50	2.60	2.80	2.90	2.90	7
2.25	2.15	2.25	2.35	2.40	2.45	2.35	2.30	2.50	u2.75 <sub>s</sub>	2.80	2.90	8
2.20	2.30	2.30	2.25	J2.45 <sub>s</sub>	u2.40 <sub>s</sub>	2.20	F	F	F	F	u2.90 <sub>F</sub>	9
2.20	2.20	2.30	2.35	2.40	2.35	u2.30 <sub>s</sub>	2.15	u2.25 <sub>F</sub>	F	F	F	10
C	2.20	2.20	2.20	2.25	2.20	2.05	F	F	F	F	2.85	11
2.20	2.25	2.30	2.35	2.35	2.20	u2.05 <sub>R</sub>	F	C	F	F	F	12
2.20	2.20	2.30	2.30	2.35	2.25	u2.00 <sub>s</sub>	F	F	F	F	F	13
2.25	2.20	2.20	C	C	2.00	2.00	F	F	F	u2.70 <sub>FS</sub>	F	14
2.10	2.15	2.20	2.20	2.10	2.00	2.00	F	F	F	F	F	15
2.15	2.10	2.20	2.30	2.30	2.20	2.00	F	F	F	F	F	16
2.20	2.30	2.35	2.45	2.45	2.40 <sub>H</sub>	2.15 <sub>H</sub>	F	F	F	F	u2.65 <sub>F</sub>	17
2.10	2.10	2.15	2.20	2.20	2.20	2.05	F	F	F	F	F	18
2.30	2.30	2.30	2.30	2.20 <sub>H</sub>	2.10 <sub>H</sub>	1.90 <sub>H</sub>	F	F	F	F	F	19
2.10	2.10	2.15	2.20	2.10	2.00	1.95	F	F	F	F	F	20
2.15	2.20	2.20	2.20	2.25	2.10	2.10	J2.00 <sub>F</sub>	F	2.60 <sub>F</sub>	F	2.95	21
2.20	2.25	2.25	2.30	2.30	2.25	2.05	F	F	F	F	F	22
2.10	2.15	2.30	2.35	2.40	2.30	2.05	FS	F	F	u3.15 <sub>F</sub>	u3.30 <sub>F</sub>	23
2.20	2.20	2.20	2.30	2.35	2.30	2.05	2.10	F	F	F	F	24
2.25	2.25	2.25	2.25	2.30	2.20	2.00	F	F	F	F	F	25
2.25	2.20	2.35	2.40	2.45	2.40	2.25	u2.10 <sub>F</sub>	F	F	F	3.05	26
2.30	2.20	2.35	2.35	2.45	2.35	2.20	F	F	F	2.70	F	27
2.30	2.30	2.30	2.30	2.35	2.25	2.10	F	F	2.60	F	F	28
2.30	2.30	2.35	2.30	2.30	2.30	2.05	F	F	F	2.95	F	29
2.35	2.40	2.45	2.40	2.35	2.20	u2.10 <sub>s</sub>	F	F	F	F	FS	30
29	30	30	29	29	30	29	11	7	8	11	13	Count
2.25	2.20	2.30	2.30	2.35	2.30	2.10	2.35	u2.60	u2.80	2.85	2.95	Median
2.25	2.25	2.30	2.35	2.35	2.30	2.15	2.35	u2.60	u2.80	2.85	2.95	Mean

Sweep 1.0 Mc, to 25.0 Mc, in 27 seconds,

Characteristic : foF<sub>2</sub>  
Unit : Mc.  
Month : October 1960

TABLE 34  
Ionospheric Data  
75°E Mean Time

Latitude: 10°2' N  
Longitude: 77°5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	11.6	11.0	8.0	F	F	F	U6.8F	10.2F	12.2	12.0	11.8	11.7
2	14.4	11.1	7.5	5.4	4.6	4.6	7.3	10.0	11.8	11.8	11.8	11.8
3	11.0	9.7	9.4	9.3	7.1	4.0	6.6	10.4	12.0	12.8	11.9	11.5
4	12.0	11.0	7.7	5.8	4.5	3.9	6.9	10.4	12.0	12.0	10.8	10.3
5	F	F	F	F	10.4F	F	F	F	12.7H	12.0	11.6	11.4
6	U11.6s	12.2	9.9	6.4	E	R	7.3	10.5	10.7	10.8	10.4	11.8
7	10.4	11.4	11.4	9.2	7.6	7.3	8.2	11.0	11.4H	11.3	C	13.5
8	11.8	9.6	8.3	7.1	3.6	E	7.8	11.5	13.1	15.0	15.0	14.9
9	9.5	8.7	7.7	6.6	5.5	4.5	7.1	10.3	12.4	13.3	11.8H	11.2
10	11.4	11.6	9.4	7.6	4.7	2.4	6.8	10.0	12.3	13.0	12.0	11.4
11	11.2	F	U7.8F	6.4	F	U5.0F	7.7	10.8	12.6	13.8	13.2H	10.7
12	11.3	10.9	8.2	6.6	5.3	3.8	7.3	10.6	12.4	13.7	14.1	11.9
13	F	8.8	F	F	F	F	U7.2F	10.5	12.2	13.4	13.2	11.5
14	F	U8.6F	7.3	5.7F	F	3.9	7.1	10.4	12.0	12.8	12.0	11.7
15	F	U10.9F	8.3	5.3	F	F	F	10.2	12.2	13.0	12.0	11.0
16	11.0	12.1	11.0	9.5	7.5	5.8	8.0	10.8	11.7	12.3	12.5	12.3
17	F	F	8.3	F	5.8	4.2	7.0	10.4	11.6	11.0	10.0	9.9
18	9.8	F	7.8	U6.4F	U5.3F	FH	U7.2F	10.2	12.0	13.2	12.5	10.9
19	12.8	11.5	10.5	9.1	8.4	8.8	10.4	11.6	12.7	12.5	11.8	11.5
20	10.8	11.7	10.6	9.3	8.6	8.5	9.8	11.7	13.3	14.1	12.8	11.8
21	F	11.0	9.0	6.4	4.0	3.1	7.1	10.2	11.8	12.5	12.0	11.4
22	11.3	11.2	10.1	F	7.0	6.8	8.4	10.8	12.4	12.8	11.6	11.2
23	C	C	C	C	C	C	6.4	9.8	11.2	11.4H	10.2	10.0
24	F	F	F	8.2	5.6	F	6.3	9.2	11.7	12.4	10.8	10.4
25	F	F	F	F	7.4	F	F	10.2	11.6	11.7	10.8	10.7
26	11.2	10.6	U9.2s	8.2	9.8	8.1	8.8H	11.2H	12.0	12.7	13.0	12.6
27	9.9	9.5	C	9.4	8.4	7.2	C	10.0	C	C	C	C
28	C	C	C	C	C	C	C	9.4	11.1	12.1	11.8	U11.7s
29	11.0	U10.0s	10.4	U9.5s	8.2	5.5	6.6	9.5	U11.8s	12.8	11.6	11.4
30	12.6	12.2	8.6	5.6	3.6	2.9	6.1	U9.7s	12.0	13.0	12.7	12.3
31	11.0	10.5	7.9	6.8	U6.0s	5.1	6.7	10.2	12.3	12.8	12.2	11.3
Mean	11.3	10.7	8.9	7.4	6.5	5.3	7.4	10.4	12.0	12.6	12.0	11.5
Median	11.2	11.0	8.4	6.8	5.9	4.6	7.2	10.4	12.0	12.8	11.9	11.4
Count	21	23	24	23	24	21	26	30	30	30	29	30

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF<sub>2</sub>  
Unit : Mc.  
Month : October 1960

TABLE 34  
Ionospheric Data  
75°E Mean Time

Latitude: 10°2' N  
Longitude: 77°5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
12.2	12.7	12.8	12.6	12.4	11.8	11.8	11.8	u10.7F	u12.0F	F	u14.1F	1
11.7	11.3	11.9	11.8	11.6	11.2	11.2	11.4	12.5	12.1	12.7	11.0	2
11.8	12.2	12.7	13.3	13.3	13.1	12.5	11.8	12.7	12.8	12.8	12.1	3
10.3	10.9	11.8	12.8	13.0	12.8	11.5	F	F	u10.1F	F	F	4
11.4	12.0	12.8	13.4	14.0	14.2	13.1	11.4	F	F	12.2	F	5
12.4	13.4	14.4	14.2	13.2	12.1H	12.8	13.4	11.6	10.2	9.1	9.5	6
13.2	14.2	14.6	14.4	14.8	15.6	14.2	13.9	13.4	13.2	13.0	13.0	7
14.8	13.6	13.6	13.8	13.8	13.6	13.0	11.3	10.4	10.1	10.6	10.7	8
11.2	11.7	12.2	12.4	12.0	u11.8s	11.7	11.6	11.0	10.8	11.6	11.7	9
11.2	11.6	12.0	12.5	12.8	12.5	11.0	9.4	u8.4F	F	F	11.2F	10
11.3	12.4	13.1	13.5	13.9	14.1	13.4	F	F	F	F	F	11
11.1	11.0	11.1	11.0	11.0	10.9	10.0	F	F	F	F	F	12
11.4	11.7	11.8	11.4	11.2	10.7	9.9	F	F	F	F	F	13
12.1	12.5	12.8	12.8	12.6	u11.8s	10.9	u8.4F	F	F	F	F	14
11.4	12.1	12.6	12.9	12.1	u10.7s	9.4	8.8	9.1	9.6	u12.3s	12.6	15
12.3	12.3	12.7	C	u11.9s	11.4	9.6	F	F	C	9.8	F	16
9.8	10.3	10.8	11.0	11.0	10.5	u9.8s	F	F	F	F	F	17
11.0	11.0	11.4	12.2	12.6	12.8	13.3	13.4	12.9	12.8	12.3	12.9	18
11.5	11.8	11.9	12.3	u11.9s	11.4	11.0	u9.5F	F	F	10.0	10.5	19
12.3	12.7	13.8	14.1	14.6	13.8	u12.1R	C	F	F	F	F	20
11.6	12.0	12.8	13.6	13.6	13.7	12.6	u9.4s	F	F	F	F	21
11.5	11.6	11.6	12.3	12.8	12.8	12.8	F	F	F	F	F	22
10.0	10.5	11.2	12.0	12.6	12.7	j12.2R	F	F	F	F	F	23
10.6	11.0	11.8	12.8	13.4	13.6	12.8	11.0	F	F	F	F	24
10.4	10.8	11.6	12.5	12.4	11.4	10.6	u9.6s	F	F	F	F	25
12.9	12.9	13.6	13.0	12.8	11.4	10.9	10.8	10.7	11.4	10.4	11.0	26
C	C	C	11.0	C	C	C	C	C	C	C	C	27
11.8	12.0	12.9	13.4	13.2	13.2	11.5	10.1	11.6	13.0	12.4	11.2	28
11.6	11.8	12.6	13.0	13.2	13.0	j12.1s	11.3	12.2	11.5	10.6	11.1	29
11.9	11.9	12.5	13.4	14.0	u13.2s	12.5	13.2	13.5	12.8	12.1	u11.7s	30
11.4	11.8	12.4	12.8	12.6	12.3	S	11.0	F	11.2	u12.4s	12.2	31
11.6	11.9	12.5	12.7	12.8	12.5	11.7	11.1	11.5	11.6	11.5	11.6	Mean
11.5	11.8	12.6	12.8	12.8	12.6	11.8	11.3	11.6	11.5	12.2	11.4	Median
30	30	30	30	30	30	29	21	14	15	16	16	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF<sub>2</sub>

Unit : Mc.

Month : October 1960

TABLE 34—Contd.

Ionospheric Data

75°E Mean Time

Latitude: 10°2' N

Longitude: 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	11.0	10.1	F	F	F	F	u8.4F	11.4	12.5	11.9	11.6	11.7
2	12.8	8.7	6.5	4.7	4.6	5.6	9.0	11.1	11.8	11.8	11.8	11.8
3	10.6	9.7	9.8	8.3	5.8	4.3	9.1	11.3	12.6	12.5	11.8	11.6
4	11.6	9.5	6.4	5.2	4.2	4.0	9.2	11.5	11.7	11.3	10.6	10.2
5	F	F	F	11.4	u9.6	u8.7F	F	F	12.7	11.8	11.4	11.0
6	11.8	11.6	8.2	3.8H	E	4.5	9.6	10.6	11.0	10.0	11.6	11.8
7	11.3	10.9	11.3	7.6	6.9	7.6H	9.2	12.0	11.7H	12.0	C	13.0
8	10.4	8.9	7.7	5.8	2.5	4.8	9.8	12.1	14.2	15.0	15.0	14.7
9	9.4	8.1	7.2	6.1	5.1	4.5	8.9	11.4	13.3	13.0H	11.1	11.3
10	11.6	10.6	8.5	6.6	3.2	4.2	9.1	11.5	13.0	12.9	11.6	11.2
11	F	F	6.9	F	F	4.9F	9.3	12.0	13.1	13.8	u11.6R	10.8
12	11.1	F	7.3	5.8	4.5	4.7	9.4	11.3	13.1	14.0	12.9	11.5
13	F	F	u6.9F	F	F	F	9.2	11.4	12.9	13.7	12.5	11.1
14	F	8.0	6.4	5.0F	u4.4F	4.5	9.0	11.3	12.5	12.6	11.5	11.7
15	F	F	F	F	F	F	8.7F	11.3	12.8	13.0	11.1	11.2
16	11.5	11.9	10.3	8.6	6.5	6.2	9.5	11.5	11.8	12.5	12.4	12.3
17	F	9.0	u6.9F	6.4	5.2	4.4	9.0	11.1	11.5	10.4	10.0	9.8
18	9.0	8.6	7.4	F	F	F	9.2	11.4	12.8	13.1	11.8	10.8
19	u11.9s	10.9	9.8	8.7	8.5	9.8	11.0	12.5	12.6	12.2	11.6	11.3
20	11.1	11.6	9.5	8.8	8.5	9.0	10.9	12.3	13.6	13.8	12.1	12.1
21	11.4	10.2	7.8	5.2	3.3	4.3	9.2	11.1	12.6	12.6	11.6	11.4
22	11.0	11.2	8.8	7.7	7.0	6.6	10.0	11.7	12.8	12.2	11.4	11.3
23	C	C	C	C	C	C	8.2	10.8	11.6	10.2	10.0	9.8
24	F	F	F	7.0	4.4	u4.1F	8.1	10.5	12.2R	12.2	10.4	10.4
25	F	F	10.6	F	F	F	F	11.4	11.8	11.2	10.6	10.5
26	11.0	9.6	8.5	8.8	9.2	8.0	10.4H	11.4	12.2	13.2	12.8	12.8
27	9.6	C	C	9.3	7.8	5.9	8.8	C	C	C	C	C
28	C	C	C	C	C	C	C	10.6	11.7	C	11.8	11.7
29	10.8	10.2	u10.0s	9.2	u7.0s	4.5	8.4	10.8	12.6	12.4	11.4	11.4
30	12.9	10.8	6.9	4.1	3.0	4.0	8.0	10.8	12.7	12.8	12.6	12.0
31	10.8	C	u7.2s	6.6	5.6	4.7	8.7	11.4	12.8	12.6	11.8	11.3
Mean	11.1	10.0	8.2	7.0	5.8	5.6	9.2	11.4	12.5	12.4	11.7	11.4
Median	11.1	10.2	7.8	6.6	5.2	4.7	9.2	11.4	12.6	12.5	11.6	11.4
Count	21	20	24	23	23	24	28	29	30	29	29	30

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF<sub>2</sub>

Unit : Mc.

Month : October 1960

TABLE 34—Contd.

Ionospheric Data

75°E Mean Time

Latitude: 10°2' N

Longitude: 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
12.4	13.0	12.8	12.5	12.1	C	11.6	10.7	u11.0F	F	F	14.1	1
11.4	11.7	12.1	11.8	11.6	11.2	11.4	11.8	12.4	12.4	11.9	11.2	2
12.1	12.5	12.8	13.4	13.1	12.8	12.2	12.4	12.9	13.1	12.2	12.0	3
10.6	11.4	12.6	13.2	13.0	12.3	10.5	8.8	F	u11.0F	F	F	4
11.7	12.4	13.0	13.8	14.2	14.0	12.0	10.9	F	F	12.0	F	5
12.6	14.2	14.2	13.7	12.7	12.2H	13.8	12.7	11.4	9.6	9.2	9.8	6
13.8	14.6	14.5	14.4	u15.2s	14.8	14.0	13.6	13.2	13.2	12.8	12.6	7
13.6	13.6	13.8	13.8	13.6	13.6	12.0	10.6	10.2	10.2	10.9	9.8	8
11.5	12.0	12.2	12.2	12.0	u11.8s	11.4	11.6	11.0	11.4	11.7	11.4	9
11.3	11.8	12.4	12.6	12.8	11.8	10.2	8.7	F	F	11.0	11.6	10
11.7	12.8	13.2	13.7	14.1	14.2	12.4	F	u11.5F	F	F	F	11
10.8	11.1	11.0	10.9	11.0	10.5	9.0F	F	F	F	F	F	12
11.4	11.8	11.6	11.3	10.9	10.6	F	F	F	F	F	u9.8F	13
12.3	12.5	12.7	12.7	11.9	11.5	u9.7s	F	F	F	F	F	14
11.8	12.3	12.9	12.7	u11.9s	9.5	9.1	u9.0F	F	F	12.9	11.7	15
12.4	12.5	C	C	11.4	10.7	F	F	F	C	u10.3s	F	16
C	10.5	10.8	11.0	10.8	10.4	8.7	F	F	F	F	10.8	17
11.0	11.0	11.6	12.4	12.8	13.1	13.3	13.3	12.8	12.5	12.3	12.9	18
11.5	11.8	12.2	12.0	11.7	11.4	10.5	F	F	9.5	u10.1s	10.7	19
12.5	13.4	14.0	14.3	14.3	u12.7R	F	F	F	F	F	u11.0F	20
11.8	12.6	13.4	13.6	13.6	13.0	11.0	F	F	F	F	F	21
11.6	11.6	u11.8s	12.8	13.0	13.0	12.3	F	F	F	F	C	22
10.4	10.6	11.6	12.4	C	12.6	11.4	F	F	F	10.4	F	23
10.8	11.5	C	13.2	13.6	13.4	u12.0s	u10.2F	F	F	F	F	24
10.2	11.2	12.4	C	u12.0s	C	u10.0s	F	F	F	F	u12.0F	25
13.0	13.2	13.4	13.0	u12.4s	11.0	10.7	10.8	11.0	11.0	10.8	10.6	26
C	C	C	C	C	C	C	C	C	C	C	C	27
11.8	12.2	13.1	13.2	u13.2s	12.6	10.6	10.5	12.9	13.2	11.7	11.2	28
11.8	12.1	12.9	13.2	13.0	12.5	11.6	11.6	12.3	10.8	11.0	11.4	29
12.0	12.1	12.9	13.7	13.7	13.0	12.6	13.7	13.0	12.4	u12.0s	11.5	30
11.7	12.5	12.6	12.9	12.6	12.3	11.6	10.6	u10.8F	11.7	13.0	11.2	31
11.8	12.2	12.7	12.9	12.7	12.2	11.3	11.2	11.9	11.6	11.5	11.4	Mean
11.7	12.2	12.8	13.0	12.8	12.4	11.4	10.8	11.9	11.6	11.7	11.3	Median
29	30	28	28	29	28	27	18	14	14	18	20	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF<sub>1</sub>

TABLE 35

Latitude: 10°2' N

Unit : Mc.

Ionospheric Data

Longitude: 77°5' E

Month : October 1960

75°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	B
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
31								L	L	L	L	L
Mean								..	..	..	..	..
Median								..	..	..	..	..
Count								..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF1

Unit : Mc.

Month : October 1960

TABLE 35

Ionospheric Data

75°E Mean Time.

Latitude: 10.2°N

Longitude: 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	..								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L								5
L	L	L	L	L								6
L	L	L	L	L	L							7
L	L	L	L	L	L							8
L	L	L	L	L	L							9
L	L	L	L	L	L							10
B	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	C	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
C	C	C	L	C	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
LH	LH	LH	L	L								30
L	L	L	L	L								31
..	..	..	..	..	..							Mean
..	..	..	..	..	..							Median
..	..	..	..	..	..							Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : foF<sub>1</sub>

TABLE 35—Contd.

Latitude: 10°2' N

Unit : Mc.

Ionospheric Data

Longitude: 77°5' E

Month : October 1960

75°E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	L
2							L	L	L	L	L	L
3							L	L	L	L	L	L
4							L	L	L	L	L	L
5							..	L	L	L	L	L
6							..	L	L	L	L	L
7							..	L	L	L	C	L
8							L	L	L	L	L	L
9							L	L	L	L	L	L
10							..	L	L	L	L	L
11								L	L	L	B	B
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16							..	L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20							..	L	L	L	L	L
21							..	L	L	L	L	L
22							..	L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25							..	L	L	L	L	L
26								L	L	L	L	L
27								C	C	C	C	C
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
31								L	L	LH	L	L
Mean							..	..	..	..	..	..
Median							..	..	..	..	..	..
Count							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foF<sub>1</sub>  
 Unit : Mc.  
 Month : October 1960

TABLE 35—Contd.  
 Ionospheric Data  
 75°E Mean Time

Latitude: 10°2' N  
 Longitude: 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L									1
L	L	L	L									2
L	L	L	L									3
L	L	L	L									4
L	L	L	L									5
L	L	L	L	L								6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L								11
L	L	L	L	L								12
L	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	C	C	L								16
L	L	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L								26
L	L	L	L	L								27
L	L	L	L	L								28
L	L	L	L	L								29
L	L	L	L	L								30
L	L	L	L	L								31
..	..	..	..	..								Mean
..	..	..	..	..								Median
..	..	..	..	..								Count

Sweep 1.0 Mc to 25.0 Mc. in 27 seconds.

Characteristic : foE  
Unit : Mc.  
Month : October 1960

TABLE 36  
Ionospheric Data  
75°E Mean Time

Latitude: 10°2' N  
Longitude: 77°5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								A	A	A	A	A
2								A	A	A	A	A
3							1.9	A	A	A	A	A
4								A	A	A	A	A
5								A	A	A	A	A
6								A	A	A	A	A
7								2.6	A	A	C	A
8							2.3	2.9	B	3.3	A	A
9								2.8	A	A	A	A
10								2.6	A	A	A	A
11								3.2	A	A	A	B
12								2.8	U3.3R	A	A	A
13								3.0	A	A	A	A
14								2.8	A	A	A	A
15												
16								A	A	A	A	A
17							U1.9R	R	A	A	A	A
18								A	A	A	A	A
19								U2.8R	A	A	A	A
20								2.7	A	A	A	A
21								A	A	A	A	A
22								A	A	A	A	A
23								2.7	A	A	A	A
24								A	A	A	A	A
25												
26							A	A	A	A	A	A
27							C	U2.7R	C	C	C	C
28							C	2.8	A	A	A	A
29								EH	A	A	A	A
30								F	A	A	A	A
31								2.6	A	A	A	A
Mean							..	2.8	..	..	..	..
Median							..	2.8	..	..	..	..
Count							3	14	1	1	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE

Unit : Mc:

Month : October 1960

TABLE 36  
Ionospheric Data  
75°E Mean Time

Latitude: 16°2' N

Longitude: 77°5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A								1
A	A	A	A	A	A							2
A	A	A	A	A	..							3
A	A	A	A	A	..							4
A	A	A	A	A	..							5
A	3.7	A	A	A	A							6
A	A	A	A	A	A							7
A	A	A	A	A	A							8
A	A	A	A	A	A							9
A	A	A	A	A	A							10
B	A	A	A	A	A							11
A	A	A	A	A	A							12
A	A	A	A	A	A							13
A	3.9	A	A	A	A							14
A	A	A	A	A	..							15
A	A	A	C	A	..							16
A	A	A	A	F	R							17
A	A	u3.7R	R	A	A							18
A	A	A	A	A	A							19
A	A	A	A	A	A							20
A	A	A	3.2	A								21
A	A	A	A	A								22
A	A	A	A	A	A							23
A	A	A	A	A	..							24
A	A	A	A	A	..							25
A	A	A	A	A	A							26
C	C	C	A	C	C							27
A	A	F	A	F								28
A	A	A	A	B								29
A	A	u3.7F	A	F								30
A	A	A	F	A								31
..	..	..	..	..	..							Mean
..	..	..	..	..	..							Median
..	2	2	1	..	..							Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE  
Unit : Mc.  
Month : October 1960

TABLE 36—Contd.  
Ionospheric Data  
75°E Mean Time

Latitude: 10°2' N  
Longitude: 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								A	A	A	A	A
2								A	A	A	A	A
3							2.5H	A	A	A	A	A
4							A	A	A	A	A	A
5							2.3	A	A	A	A	A
6							R	A	A	A	A	B
7								A	A	A	C	A
8						1.9	2.6	B	3.3	A	A	A
9							2.4	3.1	A	A	A	A
10								2.8	A	A	A	A
11								R	A	A	B	B
12								B	u3.5R	A	A	A
13								3.1	A	A	A	A
14								A	A	A	A	A
15								A	A	A	A	A
16								A	A	A	A	A
17							u2.4R	A	A	A	A	A
18							..	F	A	A	A	A
19							..	A	A	A	A	A
20							..	3.1	A	A	A	A
21							A	A	A	A	A	A
22							..	A	A	A	A	A
23							2.3	A	A	A	A	A
24							2.3H	2.8	A	A	A	A
25							2.3	A	A	A	A	A
26							A	A	A	A	A	A
27							..	C	C	C	C	C
28							..	A	A	A	A	A
29							u2.4RH	F	A	A	A	A
30							F	3.0	A	A	A	A
31							2.3	F	A	A	A	A
Mean						..	2.4	3.0	..	..	..	..
Median						..	2.4	3.0	..	..	..	..
Count						1	10	6	2	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : foE

TABLE 36—Contd.

Latitude: 10° 2' N

Unit : Mc.

Ionospheric Data

Longitude: 77° 5' E

Month : October 1960

75°E Mean Time.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	A	A	..								1
A	A	A	A	A								2
A	A	A	A	A								3
A	A	A	A	A								4
A	A	A	A	..								5
A	R	A	A	A								6
A	A	A	A	A								7
A	A	A	A	A								8
A	A	A	A	..								9
B	A	A	A	..								10
A	A	A	A	..								11
A	A	A	A	A								12
A	A	A	A	A								13
A	A	A	A	A								14
A	A	A	A	..								15
A	A	C	C	A								16
C	A	A	A	F								17
A	A	u3.7R	3.2	A								18
A	A	A	A	A								19
A	3.7	A	A	..								20
A	A	3.4	A	..								21
A	A	A	A	A								22
A	A	A	A	C								23
A	A	C	u3.0A	A								24
A	A	3.4	C	A								25
A	A	A	A	A								26
C	C	C	C	C								27
A	A	A	A	B								28
A	A	A	A	F								29
A	A	A	A	..								30
A	A	A	A	..								31
..	..	..	..	..								Mean
..	..	..	..	..								Median
..	1	3	2	..								Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo Es  
Unit : Mc.  
Month : October 1960

TABLE 37  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								7.6	10.2	10.6	12.0	12.0
2								7.6	10.0	12.0	12.0	12.0
3							G	4.4	10.0	12.0	12.0	13.0
4							2.8	7.6	11.4	11.6	11.5	12.0
5		5.8					..	7.0	8.6	11.0	11.6	12.6
6		..					..	7.8	10.3	10.8	11.8	12.8
7		..					..	G	9.4	11.4	C	12.8
8	5.8	5.8					G	G	9.6	5.6	12.4	12.0
9							3.8	G	8.6	11.8	11.5	11.8
10								G	8.0	11.0	11.4	12.0
11								G	10.0	10.6	11.2	B
12								..	G	9.0	11.5	11.8
13								G	8.4	10.6	11.4	12.0
14								6.6	9.0	11.0	12.0	11.8
15								G	9.4	11.4	11.2	11.8
16			2.9					8.8	10.7	11.0	12.0	12.0
17							G	8.6	10.6	11.0	11.8	11.4
18								8.4	10.0	11.0	11.6	12.0
19								7.2s	10.4	10.8	12.1	12.4
20								G	7.7	10.1	12.0	11.8
21								5.0	10.0	11.0	12.2	12.0
22	7.4							9.0	11.4	12.0	12.4	12.0
23	G	C	C	C	C	C		8.0	11.0	12.0	11.2	12.0
24	..							5.6	10.4	11.0	12.0	12.5
25	2.0							7.2	11.0	11.4	12.4	12.2
26	3.2					5.6	5.6	9.0	11.4	7.6	12.0	12.0
27	..		C				C	C	C	C	C	C
28	G	C	C	C	C	C	C	6.8s	9.4	11.2	13.0	13.2
29		1.7	4.5				..	G	10.2s	12.1	13.0	12.6
30							2.4	7.0s	8.6	11.3	12.4	13.0
31				2.3				G	10.3	12.0	13.0	12.4
Mean	..	..	..	..	..	..	..	7.3	9.9	10.9	12.0	12.2
Median	..	..	..	..	..	..	2.4	6.7	10.0	11.0	12.0	12.0
Count	4	3	2	1	1	..	7	30	30	30	29	29

Sweep 1°0 Mc. to 25°0 Mc. in 27 seconds.

Characteristic : fo Es

Unit : Mc.

Month : October 1960

TABLE 37  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
11.5	10.6	12.2	10.4	9.6	..							1
12.4	11.8	12.5	10.8	9.4	8.7							2
12.2	12.0	12.0	10.8	9.2	6.8							3
12.8	12.6	11.6	10.2	8.8	7.8					8.4	2.0	4
12.4	11.8	10.0	9.8	8.8	..				5.0	3.8	4.0	5
12.0	G	9.2	8.7	9.0	7.0				..	..	..	6
11.4	18.6	12.4	12.2	10.8	6.8			2.1	3.6	3.0	6.0	7
12.0	12.0	11.8	10.4	8.2	6.5				..	..	..	8
12.2	12.2	11.6	10.0	9.0	7.6				3.0	..	..	9
11.6	12.0	11.2	9.8	8.2						3.1	..	10
11.4	10.0	8.6	6.0	6.8								11
11.4	12.0	11.4	9.8	9.4							6.0	12
12.0	11.6	11.2	10.6	8.6							..	13
11.6	11.4	10.8	8.8	8.6	u8.0s					3.4	5.6	14
11.4	10.4	10.0	9.6	9.0	..						..	15
12.1	12.4	11.2	C	10.2	..				C		..	16
12.5	13.0	12.4	11.6	u8.4s	u6.8s						..	17
12.0	12.2	11.2	9.0	8.2	8.9						3.4	18
11.8	11.3	11.7	10.8	7.8						4.5	..	19
12.2	8.8	8.8	8.8	8.5			C				..	20
12.2	11.5	10.6	9.3	8.8							9.0	21
12.6	13.0	11.6	10.5	9.0							..	22
12.2	12.0	12.0	10.0	8.0	8.3						3.8	23
11.6	11.6	8.0	7.6	7.4	8.6				7.0		7.0	24
12.0	12.0	9.6	8.6	9.0	..						3.9	25
12.0	10.0	10.0	10.8	9.0	u6.0s					C	..	26
C	C	C	10.6	C	C	C	C	C	C	C	C	27
12.4	11.2	10.6	11.0	9.0	u4.6s						..	28
12.6	12.2	11.0	11.0	9.6	8.0						..	29
12.7	12.6	10.2	10.4	9.0	7.5						u10.0s	30
12.4	12.0	10.6	10.4	u9.4s	u6.8s						..	31
12.0	11.9	10.9	9.9	8.8	7.3	..	..	..	..	4.4	5.5	Mean
12.0	12.0	11.2	10.3	9.0	7.5	..	..	..	..	3.6	5.6	Median
30	30	30	30	30	17	..	..	1	4	6	11	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : fo Es

Unit : Mc.

Month : October 1960

TABLE 37—*contd.*

Ionospheric Data

75°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							..	8.8	11.0	12.0	12.2	11.0
2							..	9.4	11.0	11.8	12.1	12.0
3							G	8.0	11.4	12.0	12.6	12.0
4							3.5	10.5	11.4	12.0	12.2	12.0
5	2.6		2.0				3.2	7.4	10.5	10.6	12.0	12.4
6	..		..				G	9.2	10.8	11.8	12.4	B
7	..		..				..	9.0	10.2	11.4	C	12.0
8	5.8	4.8				G	G	7.7	G	10.2	12.0	12.0
9							G	G	10.8	11.8	11.8	12.0
10				6.2				6.4	10.2	11.6	11.7	11.8
11								G	10.2	11.4	B	11.6
12								B	7.0	11.0	12.0	11.4
13	..	4.0						7.4	9.6	12.0	11.4	11.8
14								8.0	11.0	12.0	12.0	11.4
15	..							8.4	11.4	11.6	12.0	10.4
16								9.7	10.8	12.0	12.0	12.1
17							G	10.4	11.3	12.0	11.6	12.0
18							..	9.1	8.6	11.8	12.0	12.5
19							..	9.3	11.1	11.9	12.0	12.0
20							..	6.8	8.8	11.2	11.7	12.0
21							3.2	9.4	11.0	12.0	12.0	12.0
22							..	10.8	12.0	12.0	12.4	12.2
23							G	9.0	11.4	12.6	12.0	12.0
24							G	6.6	10.2	12.0	12.2	12.0
25	2.8	..	4.2	..	..	..	G	9.4	11.2	11.5	12.0	12.0
26	4.8	..	..	6.8	6.4	..	8.2	9.5	10.6	11.4	11.0	12.0
27	..						..	C	C	C	C	C
28	..						..	u9.0s	12.0	C	12.7	12.8
29	..	u5.0s	..				G	u8.0s	11.0	12.4	13.0	12.6
30	u3.2s						u7.0s	G	10.3	12.7	13.0	12.4
31	..						3.8	u9.0s	11.0	12.2	13.0	12.6
Mean	3.8	..	..	..	..	..	4.8	8.7	10.6	11.8	12.1	12.0
Median	3.2	..	..	..	..	..	G	9.0	10.9	11.9	12.0	12.0
Count	5	3	2	2	1	1	15	29	30	29	28	29

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo Es  
Unit : Mc.  
Month : October 1960

TABLE 37—*contd.*  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
11.0	12.2	10.8	10.6	7.4								1
12.6	11.8	11.4	11.0	8.6								2
12.0	11.2	11.0	10.5	7.5								3
13.0	13.0	10.4	9.2	7.8					8.8	5.8	4.6	4
12.0	11.8	9.8	9.0	7.0					2.6	4.8	..	5
11.8	8.0	9.0	9.0	8.5					..	..	..	6
11.2	9.2	11.0	7.6	9.1	5.8			4.6	3.4	6.6	2.4	7
12.0	12.0	11.2	9.6	7.0	..			..	..	..	..	8
12.0	11.6	11.0	10.6	7.6	..			4.4	..	..	..	9
11.8	11.8	10.0	9.2	6.4	4.2						4.0	10
11.2	8.2	7.0	7.8	..							..	11
11.4	12.0	11.0	10.0	8.0							7.0	12
10.6	11.4	10.4	10.0	7.0							..	13
11.0	10.8	10.0	9.6	8.8					3.8	6.0	3.2	14
11.8	10.0	10.0	10.0	8.0					..	..	..	15
11.4	11.0	C	C	8.3					..	..	..	16
C	13.0	11.6	9.0	7.8					..	..	..	17
12.4	12.0	9.8	7.6	8.6	6.5				3.8	u4.6s	..	18
12.1	11.5	11.1	8.9	7.6					..	..	..	19
10.8	G	8.6	9.7	..					..	..	..	20
12.0	11.0	9.2	8.6	7.0					4.2	8.2	7.0	21
12.2	12.0	11.0	9.0	7.8					..	..	..	22
12.6	12.0	11.0	10.2	C					..	..	..	23
12.0	10.2	C	7.6	8.0	4.0				4.2	4.0	2.0	24
12.0	9.2	G	C	8.0	C						5.0	25
9.8	6.8	10.2	10.4	7.0						..	..	26
C	C	C	C	C							..	27
9.4	10.4	11.4	u11.4s	8.6							..	28
12.0	9.2	10.8	8.3	8.2							..	29
13.4	11.0	11.4	u11.4s	8.0					..	u9.4s	2.0	30
12.2	10.6	10.8	u9.0s	u7.6s		4.2						31
11.7	10.9	10.4	9.2	7.8	..	..	..	..	4.4	6.2	4.1	Mean
12.0	11.1	10.8	9.4	7.8	..	..	..	..	3.8	5.9	4.0	Median
29	30	28	28	27	4	1	..	2	7	8	9	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fb Es  
Unit : Mc.  
Month : October 1960

TABLE 38  
Ionospheric Data  
75°E Mean Time

Latitude 10°2' N  
Longitude 77°5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								2.9	3.4	3.7	3.8	4.1
2								2.8	3.4	3.7	3.9	4.1
3							G	2.9	3.3	3.7	4.0	4.0
4							2.2	2.9	3.4	3.7	4.0	4.1
5		2.3						2.9	3.4	3.8	3.9	4.1
6		..						2.8	3.3	3.7	4.1	4.1
7		1.						G	3.4	3.8	C	4.0
8	2.4	2.3	..	..	..	..	G	G	..	3.8	3.9	4.2
9								G	3.4	3.8	4.0	4.1
10								G	3.4	3.8	4.1	4.2
11								G	3.7	4.0	4.1	..
12								..	G	4.0	4.1	4.3
13								G	3.4	3.9	4.2	4.3
14								3.1	3.6	3.8	4.0	4.3
15								G	3.4	3.9	4.2	4.3
16									2.8	3.5	3.9	4.3
17							G	2.9	3.5	3.8	4.0	4.2
18								2.9	3.4	4.0	4.0	4.0
19								2.8	3.3	3.8	4.0	4.1
20								G	3.3	3.6	4.0	4.1
21								3.0	3.2	3.6	3.8	4.1
22								2.8	3.2	3.6	3.9	4.0
23	G	C	C	C	C	C		2.8	3.3	3.6	3.9	4.0
24								2.8	3.2	3.6	3.8	4.0
25								2.9	3.2	3.6	3.8	3.9
26	1.8	..				1.9	3.2	2.6	3.5	3.6	3.9	3.8
27							C	G	C	C	C	C
28	C	C	C	C	C	C	C	2.7	3.2	3.6	3.6	3.8
29			1.8					G	3.2	3.5	3.7	3.8
30							2.1	2.7	3.1	3.6	3.8	4.0
31				1.6				G	3.1	3.6	3.8	3.8
Mean	..	..	..	..	..	..	..	2.8	3.3	3.7	3.9	4.1
Median	..	..	..	..	..	..	2.1	2.8	3.4	3.7	4.0	4.1
Count	2	2	1	1	1	..	6	30	29	30	29	29

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

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Characteristic : fb Es  
Unit : Mc.  
Month : October 1960

TABLE 38  
Ionospheric Data  
75°E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
4.1	3.8	3.7	3.4	3.0								1
4.0	3.9	3.7	3.5	3.0	2.3							2
4.0	3.9	3.7	3.4	3.0	..							3
4.1	4.1	3.9	3.6	3.0	2.5					2.6	..	4
4.0	4.0	3.7	3.6	3.1	..	--	--	--	2.0	1.5	1.5	5
4.1	G	3.8	3.4	3.0	2.4				..	..	..	6
4.0	7.4	3.8	4.6	4.8	2.6	--	--	1.6	2.2	1.7	2.1	7
4.0	4.0	3.8	3.5	3.0					..	..	..	8
4.0	4.0	3.8	3.6	3.0					2.4	..	..	9
4.2	4.2	3.8	3.5	3.0						1.9	--	10
4.5	4.2	3.8	3.6	3.2						..	..	11
4.3	4.2	4.0	3.6	3.0						..	2.0	12
4.4	4.2	4.0	3.6	3.1						..	..	13
4.3	4.2	3.9	3.8	3.0	2.3					1.6	2.0	14
4.3	4.0	3.8	3.6	3.1	--						--	15
4.3	4.0	3.9	C	3.0	..				C		..	16
4.1	4.0	3.8	3.5	3.0	2.4						--	17
4.1	4.0	3.8	3.6	3.0	3.5						--	18
4.2	4.0	3.7	3.4	3.0	..					1.9	--	19
4.1	4.0	3.6	3.5	3.0	..		C			..	--	20
4.0	3.8	3.6	3.3	3.0	..						3.0	21
4.0	4.0	3.7	3.3	3.0	..						..	22
3.8	3.8	3.6	4.2	4.6	3.0						..	23
4.0	3.8	3.5	3.2	2.9	2.6	--	--	--	2.4	--	2.0	24
4.0	3.8	3.6	3.4	2.8	..						1.9	25
3.6	3.7	3.5	3.3	2.8	2.0						..	26
C	C	C	3.2	C	C	C	C	C	C	C	C	27
3.8	3.7	3.4	3.2	2.8	2.1						..	28
3.8	3.8	3.6	3.2	..							..	29
3.9	3.8	3.6	3.3	2.8							2.7	30
3.8	3.7	3.6	3.2	2.8							--	31
4.1	4.1	3.7	3.5	3.1	2.5	..	..	..	..	1.9	2.2	Mean
4.0	4.0	3.7	3.5	3.0	2.4	..	..	..	..	1.8	2.0	Median
30	30	30	30	29	11	..	..	1	4	6	8	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

551

Characteristic : fb Es

Unit : Mc.

Month : October 1960.

TABLE 38—*contd.*

Ionospheric Data

75° E Mean Time

Latitude 10° 2' N

Longitude 77° 5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								3.1	3.5	3.8	3.9	4.0
2								3.1	3.5	3.7	4.0	4.1
3							G	3.1	3.5	3.8	4.1	4.0
4							2.5	3.1	3.5	4.0	4.0	4.1
5	1.8			..	..	..	2.6	3.2	3.6	3.7	4.1	4.1
6	..	..					G	3.0	3.5	3.8	4.1	..
7	..	..			..	..	..	3.0	3.5	3.8	C	4.0
8	2.2	2.1	..	..	..	G	G	..	G	3.8	4.0	4.2
9	..	..	..	..	..	..	G	G	3.5	3.7	4.0	4.1
10	..	..	..	2.2	..	..	..	..	3.6	3.9	4.1	4.2
11	..	..						G	4.0	4.0	..	..
12	..	..						..	3.6	4.1	4.3	4.2
13	..	2.6						3.2	3.7	4.0	4.4	4.3
14	..	..						3.2	3.7	4.0	4.1	4.4
15	..	..					..	3.2	3.7	4.0	4.2	4.3
16	..	..						3.2	3.6	4.0	4.1	4.2
17	..	..					G	3.2	3.6	3.9	4.2	4.1
18	..	..					..	3.1	3.6	4.0	4.0	4.2
19	..	..					..	3.1	3.6	4.0	4.1	4.1
20	..	..					..	3.1	3.5	3.8	4.0	4.1
21	..	..					2.6	3.0	3.4	3.8	4.0	4.0
22	..	..					..	3.2	3.4	3.8	4.0	4.0
23	..	..		..	..	..	G	3.0	3.4	3.7	4.0	4.0
24	..	..		..	..	..	G	3.0	3.4	3.6	4.0	4.0
25	..	..		..	..	..	G	3.0	3.4	3.8	3.9	3.9
26	2.0	..	..	3.2	..	..	2.7	3.0	3.5	3.4	3.8	3.8
27	..	..	..	..	..	..	..	C	C	C	C	C
28	..	..	..	..	..	..	..	3.0	3.3	C	3.8	3.8
29	..	1.8	..	..	..	..	G	3.0	3.4	3.7	3.8	3.8
30	..	..	..	..	..	..	2.4	G	3.4	3.6	3.8	3.9
31	..	..	..	..	..	..	..	3.0	3.4	3.6	3.8	3.9
Mean	..	..	..	..	..	..	2.6	3.1	3.5	3.8	4.0	4.1
Median	..	..	..	..	..	..	G	3.1	3.5	3.8	4.0	4.1
Count	3	3	..	2	..	1	11	27	30	29	28	28

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fb Es  
Unit : Mc.  
Month : October 1960.

TABLE 38—*contd.*  
Ionospheric Data  
75 E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
4.1	3.8	3.6	3.2	..								1
4.0	3.8	3.5	3.2	2.7								2
4.1	3.9	3.6	3.3	2.8								3
4.0	3.9	3.7	3.3	2.9					1.9	1.7	2.2	4
4.1	4.0	3.6	3.2	..					1.5	2.4	..	5
4.0	4.0	3.7	3.2	2.6					..	..	..	6
4.6	4.4	4.6	4.8	3.0				1.6	..	2.8	2.3	7
4.0	4.0	3.7	3.3	2.9				..	..	..	..	8
4.1	4.0	3.7	3.4	..				2.2	..	..	..	9
..	4.0	3.8	3.2	..	2.4	..	..	..	..	..	2.3	10
4.3	4.1	3.6	4.2	..							..	11
4.2	4.1	3.8	3.4	3.0							2.6	12
4.3	4.1	3.8	3.4	2.9							..	13
4.2	4.0	3.7	3.3	2.8					2.0	1.6	1.8	14
4.1	4.0	3.7	3.4	3.0							..	15
4.2	4.0	C	C	2.6								16
C	3.9	3.8	3.3	2.8								17
4.0	4.1	3.6	3.3	3.2	2.3							18
4.0	3.7	3.6	3.2	2.7								19
4.0	G	3.7	3.4	..								20
4.0	3.7	3.6	3.1	..						1.9		21
4.0	3.8	3.6	3.1	2.6						..		22
3.8	3.8	3.9	6.0	C						..		23
3.8	3.6	C	3.1	2.8	2.0				2.2	2.0	1.6	24
4.0	3.6	G	C	2.6	C						1.5	25
3.8	3.6	3.4	3.1	2.5								26
C	C	C	C	C								27
3.8	3.5	3.4	3.1	2.5								28
3.9	3.8	3.6	..	..								29
3.8	3.6	3.4	3.3	2.8						2.3	1.7	30
3.8	3.6	3.4	3.0	2.7						..		31
4.0	3.9	3.7	3.4	2.8	..	..	..	..	..	2.1	2.0	Mean
4.0	3.9	3.6	3.3	2.8	..	..	..	..	..	2.0	2.0	Median
28	30	28	27	21	3	..	..	2	4	7	8	Count

Sweep 1.0 Mc. in 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc.

Month : October 1960.

TABLE 39  
Ionospheric Data  
75°0' E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	1.8	1.4	1.6	1.6	1.4	1.6	2.3	1.8	2.2	2.4	2.4	2.9
2	1.5	1.4	1.7	1.3	1.3	1.5	2.1	1.9	2.2	2.5	2.7	2.7
3	1.6	1.5	1.3	1.3	1.4	1.4	1.8	1.7	2.0	2.4	2.5	2.7
4	1.8	1.6	1.8	1.4	1.5	1.5	2.0	1.9	2.0	2.4	2.7	3.0
5	1.3	1.7	1.7	1.5	1.8	1.5	2.0	1.4	1.8	2.4	2.5	2.7
6	1.4	1.3	1.4	1.6	E	1.5	2.1	1.6	2.2	2.4	2.6	2.6
7	1.3	1.4	1.6	1.4	1.6	1.6	2.1	2.0	2.3	2.6	C	2.9
8	1.2	1.3	1.8	1.9	1.6	E	1.9	2.2	3.4	2.6	2.9	3.4
9	1.6	1.4	1.3	1.8	1.8	1.4	2.4	1.9	2.4	2.7	2.9	2.9
10	1.9	1.7	1.6	1.8	2.2	1.5	2.2	1.9	2.5	2.4	2.8	3.1
11	2.1	1.6	1.8	1.6	1.9	1.7	2.3	2.7	2.2	2.9	3.0	5.7
12	2.1	2.7	1.7	2.0	1.8	2.2	2.6	3.2	2.6	3.0	3.0	3.2
13	2.4	2.0	2.3	2.4	2.0	2.1	2.6	2.5	2.3	3.2	3.2	3.5
14	1.6	1.5	1.6	2.1	1.8	1.6	2.6	2.1	2.3	2.6	2.8	3.0
15	2.2	2.2	1.6	1.6	1.6	1.7	2.2	2.1	2.5	2.8	3.4	3.3
16	1.7	1.7	1.5	1.5	1.6	1.6	2.3	2.0	2.3	2.8	2.9	3.2
17	1.6	1.6	1.8	1.9	1.9	2.5	1.8	1.7	2.2	2.3	2.8	2.7
18	1.6	1.5	1.4	1.4	2.0	2.1	2.4	2.2	2.2	2.5	3.0	3.2
19	2.1	1.6	1.4	1.7	1.3	2.1	2.3	2.1	2.3	2.9	3.0	3.1
20	1.6	1.4	1.3	1.3	1.4	1.4	2.0	2.0	2.4	2.8	2.6	3.1
21	1.4	1.2	1.3	1.3	1.3	1.5	2.2	2.3	2.3	2.6	2.8	2.8
22	2.0	1.8	1.5	1.7	1.6	1.4	2.1	1.6	2.2	2.4	2.8	2.8
23	C	C	C	C	C	C	2.0	1.5	2.3	2.6	2.6	2.8
24	1.7	1.3	1.1	1.3	1.5	1.6	2.0	2.0	2.1	2.4	2.6	2.6
25	1.6	1.6	1.5	1.3	1.4	1.2	2.0	1.7	2.0	2.4	2.6	2.6
26	1.1	1.7	1.5	1.5	1.2	1.9	1.5	1.6	1.7	2.0	2.2	2.6
27	1.5	1.7	C	E	1.3	1.3	C	2.1	C	C	C	C
28	C	C	C	C	C	C	C	1.7	1.9	2.2	2.4	2.6
29	E	1.1	E	1.1	1.3	1.4	2.1	1.8	2.0	2.3	2.5	2.6
30	1.1	1.2	1.1	1.2	1.3	1.2	1.5	1.4	1.9	2.2	2.3	3.0
31	1.6	1.1	1.2	1.0	1.6	1.5	2.0	1.8	2.0	2.4	2.4	2.3
Mean	1.7	1.6	1.5	1.6	1.6	1.6	2.1	1.9	2.2	2.5	2.7	3.0
Median	1.6	1.5	1.5	1.5	1.6	1.5	2.1	1.9	2.2	2.4	2.7	2.9
Count	29	29	28	29	29	29	29	31	30	30	29	30

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc.

Month : October 1960.

TABLE 39

Ionospheric Data

75°0'E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
2.7	3.0	2.7	2.7	2.3	2.4	1.3	1.7	1.4	1.4	1.8	1.5	1
3.0	2.7	2.6	2.4	2.0	1.9	1.4	1.9	1.7	1.7	1.4	1.6	2
2.7	2.8	2.7	2.7	2.3	2.6	1.8	1.4	1.5	1.4	1.8	2.1	3
2.7	2.8	2.6	2.5	2.2	2.1	1.4	1.3	1.3	1.5	1.1	1.4	4
2.8	2.8	2.7	2.8	2.3	2.4	1.4	1.3	1.6	1.1	1.5	1.2	5
3.0	3.2	2.9	2.6	2.0	1.8	1.6	1.4	1.3	1.4	1.5	1.3	6
3.1	3.0	2.6	2.4	2.0	2.0	2.0	1.6	1.3	1.5	1.5	1.7	7
3.0	3.0	2.8	2.8	2.3	2.4	1.5	1.6	1.5	1.7	1.7	1.7	8
3.0	3.0	3.0	2.6	2.5	2.6	1.7	1.5	1.7	2.3	2.1	2.0	9
3.0	3.4	2.8	2.8	2.2	2.6	1.8	2.0	1.6	1.5	1.5	2.0	10
4.5	3.2	3.0	2.4	2.4	2.7	1.8	1.5	1.3	2.0	1.7	2.0	11
3.2	3.2	3.0	2.7	2.5	2.5	1.6	1.8	1.4	1.7	1.3	1.4	12
3.2	3.1	2.9	2.7	2.2	2.4	1.6	1.7	1.7	1.5	1.7	1.5	13
3.1	3.0	3.0	3.8	2.4	1.9	1.3	1.6	1.5	1.6	1.6	1.0	14
3.3	3.0	2.8	2.5	2.2	2.4	1.5	1.7	1.3	1.4	1.7	1.7	15
3.2	3.1	2.7	C	2.1	2.4	1.7	1.7	1.7	C	1.5	1.2	16
2.9	2.7	2.4	2.3	1.8	1.8	1.5	1.8	1.6	2.0	1.9	1.6	17
3.0	2.8	2.8	2.5	2.3	2.5	1.8	1.5	1.4	1.6	1.7	2.3	18
3.0	3.0	2.9	2.5	2.1	2.3	1.7	1.6	1.3	1.5	1.3	1.7	19
3.2	3.0	2.9	2.7	2.5	2.4	1.5	C	1.2	1.6	1.4	1.3	20
2.8	2.6	2.5	2.6	2.4	2.4	1.4	1.5	1.4	1.6	1.6	2.2	21
2.8	2.8	2.6	2.5	2.2	2.3	1.5	1.6	1.7	1.7	1.4	1.3	22
2.6	2.6	2.5	2.6	1.9	1.7	1.3	1.5	1.2	1.8	1.5	1.5	23
2.6	2.6	2.4	2.2	1.7	1.5	1.4	1.4	1.4	1.0	1.7	1.1	24
2.6	2.6	2.4	2.2	2.0	2.0	1.4	1.7	1.5	1.5	1.6	1.3	25
2.6	2.5	2.6	2.2	2.0	1.5	1.3	1.6	1.5	1.8	1.4	1.3	26
C	C	C	2.2	C	C	C	C	C	C	C	C	27
2.7	2.5	2.4	2.2	2.2	1.7	1.3	1.3	1.5	1.5	1.3	1.1	28
2.5	2.4	2.4	2.4	4.0	2.6	1.3	1.3	1.6	1.9	1.2	1.4	29
2.5	2.6	2.4	2.4	2.2	2.4	1.8	1.7	1.8	1.5	1.9	1.2	30
2.5	2.3	2.2	2.2	2.0	2.2	1.6	1.4	S	1.4	1.2	E	31
2.9	2.8	2.7	2.5	2.2	2.2	1.5	1.6	1.5	1.6	1.6	1.5	Mean
3.0	2.8	2.7	2.5	2.2	2.4	1.5	1.6	1.5	1.6	1.5	1.4	Median
30	30	30	30	30	30	30	28	29	29	30	30	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : fmin  
Unit : Mc  
Month : October 1960

TABLE 39—(contd.)  
Ionospheric Data  
75°0'E Mean Time

Latitude : 10°2' N  
Longitude : 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	1.6	1.7	1.6	1.4	1.6	2.0	2.4	1.9	2.2	2.2	2.7	2.6
2	1.5	1.4	1.6	1.5	1.3	1.6	2.4	2.2	2.6	2.6	2.8	2.8
3	1.7	1.3	1.3	1.4	1.4	1.5	2.0	1.7	2.3	2.5	2.9	2.9
4	1.6	1.4	1.6	1.5	1.4	1.6	1.9	2.0	2.5	2.7	2.7	3.0
5	1.2	1.5	1.5	1.9	1.7	1.6	1.5	1.7	2.1	2.3	2.7	3.0
6	1.3	1.2	1.3	1.9	E	1.4	1.8	1.9	2.3	2.6	2.6	4.2
7	1.7	1.5	1.8	1.3	1.7	1.8	2.4	1.9	2.4	2.8	C	3.0
8	1.0	1.4	1.9	1.6	1.6	1.4	2.0	3.0	2.9	2.8	3.0	3.1
9	1.7	1.4	1.4	1.8	1.5	1.6	2.1	2.2	2.6	2.8	3.0	3.0
10	1.9	1.6	1.6	1.9	1.7	1.8	2.6	2.4	2.3	2.5	2.9	3.0
11	1.7	1.8	1.8	1.5	1.4	1.7	2.6	2.4	2.6	2.8	6.4	4.9
12	2.2	2.2	2.2	1.9	2.0	2.2	2.5	2.8	2.6	2.7	3.1	3.2
13	2.2	2.0	2.3	2.4	2.1	2.2	2.9	2.3	2.9	3.2	3.8	3.5
14	1.4	1.7	2.0	1.8	1.6	2.0	2.6	2.0	2.6	2.7	3.0	3.2
15	2.1	2.0	1.6	1.7	1.7	1.8	2.6	2.2	2.7	3.1	3.0	3.6
16	1.6	1.5	1.6	1.6	1.4	1.7	2.7	2.2	2.4	2.7	3.0	3.2
17	1.7	1.8	1.7	2.3	2.3	1.9	1.9	2.0	2.2	2.4	2.7	2.8
18	1.6	1.4	1.4	1.7	1.7	2.3	2.5	2.3	2.4	2.8	3.0	2.8
19	1.8	1.6	1.4	1.6	1.7	1.7	2.7	2.1	2.5	2.8	3.0	3.1
20	1.6	1.4	1.4	1.7	1.3	1.6	2.6	2.3	2.8	2.8	3.0	3.1
21	1.2	1.5	1.3	1.5	1.4	1.6	2.3	2.1	2.5	2.6	2.8	2.8
22	1.7	1.7	1.7	1.6	1.4	1.6	2.4	1.8	2.2	2.5	2.8	3.0
23	C	C	C	C	C	C	2.0	2.2	2.4	2.6	2.7	2.6
24	1.8	1.3	1.2	1.3	1.7	1.7	1.9	2.0	2.2	2.4	2.7	2.5
25	1.5	1.8	1.4	1.4	1.3	1.5	1.9	1.8	2.2	2.5	2.6	2.6
26	1.1	2.0	1.3	1.1	1.7	1.7	1.3	1.7	1.8	2.1	2.4	2.8
27	1.8	C	C	E	1.3	1.7	2.4	C	C	C	C	C
28	C	C	C	C	C	C	C	1.6	1.9	C	2.4	2.8
29	1.1	E	1.1	1.1	1.2	1.4	1.8	1.8	2.3	2.4	2.5	2.6
30	1.1	1.3	1.1	1.2	1.2	1.3	1.7	1.7	2.1	2.3	2.4	2.8
31	1.2	C	1.5	1.6	1.5	1.6	1.8	1.9	2.2	2.2	2.4	2.6
Mean	1.6	1.6	1.6	1.6	1.6	1.7	2.2	2.1	2.4	2.6	2.9	3.0
Median	1.6	1.5	1.6	1.6	1.5	1.7	2.4	2.0	2.4	2.6	2.8	3.0
Count	29	27	28	29	29	29	30	30	30	29	29	30

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : October 1960.

TABLE 39—*contd.*

Ionospheric Data

75°0'E Mean Time

Latitude : 16°2' N

Longitude : 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.8	2.6	2.8	2.6	2.8	C	1.3	1.3	1.4	1.6	1.5	1.6	1
2.8	2.7	2.6	2.3	2.0	1.7	2.1	1.8	1.6	1.4	1.5	1.6	2
3.0	2.9	2.8	2.5	2.0	2.0	1.2	1.3	1.5	1.4	2.0	1.6	3
2.9	2.8	2.6	2.4	2.2	2.1	1.3	1.6	1.3	1.5	1.2	1.5	4
2.8	2.8	2.7	2.5	2.8	2.1	1.4	1.4	1.8	1.4	1.3	1.2	5
3.2	3.0	2.8	2.2	1.7	1.9	1.4	1.2	1.4	1.4	1.6	1.3	6
3.0	2.8	2.7	2.4	2.1	2.2	1.4	2.1	1.7	1.3	1.4	1.6	7
3.2	2.9	2.8	2.4	2.4	2.1	1.4	1.3	1.6	1.7	1.5	1.8	8
2.9	3.0	2.8	2.6	3.0	2.3	2.1	1.6	1.5	2.3	1.8	1.7	9
4.4	3.0	2.8	2.5	2.8	1.8	1.5	1.6	1.8	1.6	2.3	1.9	10
3.6	2.9	3.0	2.2	3.0	2.5	1.6	1.5	1.4	2.1	2.1	2.1	11
3.4	3.2	3.0	2.6	2.4	2.3	1.4	1.7	1.5	1.6	1.7	2.0	12
3.4	3.0	2.7	2.4	2.3	2.1	1.7	1.7	2.0	1.3	1.7	1.4	13
3.7	3.1	2.8	2.6	2.2	1.8	1.4	1.7	1.6	1.1	1.3	1.5	14
3.0	3.1	3.0	2.5	3.0	1.9	1.5	1.7	1.4	1.5	2.1	1.4	15
3.3	2.9	C	C	2.0	1.7	1.6	1.5	1.7	C	1.6	1.5	16
C	2.6	2.8	2.2	2.3	1.8	1.3	1.7	1.7	1.7	1.8	1.4	17
3.1	2.9	2.6	2.8	2.4	1.8	1.6	1.4	1.6	1.5	1.8	2.2	18
3.2	2.9	2.7	2.4	2.2	1.9	1.7	1.4	1.3	1.4	1.7	1.6	19
3.1	2.8	2.9	2.5	2.7	1.8	1.7	1.2	1.5	1.6	1.3	1.4	20
3.0	2.6	2.6	2.3	2.8	1.8	1.4	1.6	1.7	1.4	1.6	2.0	21
3.0	2.7	2.6	2.4	2.2	1.9	1.5	1.5	1.4	1.4	1.3	C	22
2.6	2.4	2.4	2.0	C	1.9	1.6	1.5	1.3	1.8	1.5	1.7	23
2.7	2.4	C	1.9	1.7	1.5	1.4	1.3	1.5	1.0	1.3	1.2	24
2.6	2.6	2.6	C	1.9	C	1.5	1.7	1.6	1.5	1.5	1.2	25
2.6	2.5	2.4	2.2	1.8	1.5	1.3	1.4	1.4	1.5	1.5	1.5	26
C	C	C	C	C	C	C	C	C	C	C	C	27
2.8	2.2	2.3	2.2	2.0	1.5	1.1s	1.5	1.7	1.5	1.1	1.0	28
2.6	2.4	2.4	3.4	3.2	2.1	1.8	1.4	1.8	1.7	1.4	1.5	29
2.4	2.6	2.4	2.5	2.4	1.9	1.8	1.8	1.4	1.6	1.6	1.0	30
2.6	2.4	2.2	2.1	1.8	1.8	1.3s	1.3s	1.4	1.2	1.3	1.1	31
3.0	2.8	2.7	2.4	2.3	1.9	1.5	1.5	1.6	1.5	1.6	1.5	Mean
3.0	2.8	2.7	2.4	2.3	1.9	1.4	1.5	1.5	1.5	1.5	1.5	Median
29	30	28	28	29	28	30	30	30	29	30	29	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km.

Month : October 1960

TABLE 40  
Ionospheric Data  
75.0°E Mean Time

Latitude 10°2' N

Longitude 77°5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	270	L	290
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L <sub>R</sub>
31								L	L	L	L	L
Mean								..	..	..	..	..
Median								..	..	..	..	..
Count								..	..	1	..	1

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

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Characteristic : h'F2

Unit : Km.

Month : October 1960

TABLE 40  
Ionospheric Data  
75.0° E Mean Time

Latitude 10°2' N

Longitude 77°5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L								5
L	L	L	L	L								6
L	L	L	L	L	L							7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L								16
L	L	L	L	L	L							17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
L	L	L	L	L	L							31
..	..	..	..	..	..							Mean
..	..	..	..	..	..							Median
..	..	..	..	..	..							Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2  
Unit : Km.  
Month : October 1960

TABLE 40—*contd.*  
Ionospheric Data  
75°0'E Mean Time

Latitude 10°2' N  
Longitude 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							..	L	L	L	L	L
2							L	L	L	L	L	L
3							L	L	L	L	L	L
4							L	L	L	L	L	L
5							..	L	L	L	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8							L	L	L	280	L	L
9							L	L	L	L	L	L
10							..	L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26								L	L	L	L	L
27								C	C	C	C	C
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
31								L	L	L <sub>H</sub>	L	L
Mean							..	..	..	..	..	..
Median							..	..	..	..	..	..
Count							..	..	..	1	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

Unit : Km.

Month : October 1960

TABLE 40—*contd.*

Ionospheric Data

75°0'E Mean Time

Latitude 10°2' N

Longitude 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L									1
L	L	L	L									2
L	L	L	L									3
L	L	L	L									4
L	L	L	L									5
L	L	L	L	L								6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L								11
L	L	L	L	L								12
L	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	C	C	L								16
C	L	L	L	..								17
L	L	L	L	L								18
L	L	L	L	..								19
L	L	L	L	..								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L								26
C	L	L	L	L								27
L	L	L	L	L								28
L <sub>H</sub>	L	L <sub>H</sub>	L	..								29
L	L	L	L	..								30
L	L	L	L	..								31
..	..	..	..	..								Mean
..	..	..	..	..								Median
..	..	..	..	..								Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km.

Month : October 1960

TABLE 41  
Ionospheric Data  
75.0° E Mean Time

Latitude 10° 2' N

Longitude 77° 5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	235	230	220	U275F	F	U320F	275	240	230	220	215	220
2	235	225	230	240	280	300	365	245	220	220	210	220
3	260	240	235	230	215	260	240	240	230	220	215	200
4	260	235	235	230	235	250	270	250	230	220	220H	215
5	U300F	U275F	U310F	U270F	250F	U240F	270	250	240	230	210	220
6	265	240	225	220	E	L	270	245	220	205	200	210
7	400	320	260	320	325	250	245	255	255	230	C	220
8	260	265	230	230	220	E	255	245	225	215	210	210
9	240	230	230	235	240	230	260	240	220	215	200H	200H
10	260	230	230	225	225	250	260	240	220	220	210	200
11	240	230	235	235	235	225	250	240	230	215	200	B
12	235	220	220	235	240	260	265	245	240	220	215	200
13	245	240	240	F	240	260	270	250	235	220	220	205
14	240	225	230	230	230	240	270	240	235	210	210	225
15	240	230	225	235	240	240	275	245	235	220	200	225
16	245	260	260	245	240	245	280	245	240	230	215	205
17	240	235	240	255	245	255	275	255	240	220	210	220
18	230	245	240	240	255	250	270	255	230	235	220	220
19	250	260	250	255	280	300	280	260	240	230	220	220
20	240	240	230	235	255	260	270	250	235	220	215	210
21	240	240	230	220	240	255	265	250	240	220	220	220
22	240	260	240	240	260	230	260	245	220	220	205	220
23	C	C	C	C	C	C	260	240	240	220	200	210
24	260	260	240	235	220	240	260	245	240	220	200	200
25	U320F	320	275	260	240	245	275	240	240	230	200	205
26	320	280	260	260	260	280	280	260	A	235	225	220
27	240	255	C	245	240	230	C	255	C	C	C	C
28	C	C	C	C	C	C	C	255	235	225	220	215
29	260	295	270	240	225	220	265	250	240	220	220	220H
30	255	240	230	220	240	260	275	250	230	225	220	220
31	245	240	240	260	260	240	270	250	230H	220H	225H	220
Mean	260	250	240	245	245	250	270	250	235	220	210	215
Median	245	240	235	240	240	250	270	245	235	220	215	220
Count	29	29	28	28	28	28	29	31	29	30	29	29

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F  
Unit : Km.  
Month : October 1960

TABLE 4I  
Ionospheric Data  
75°0'E Mean Time

Latitude 10°2' N.  
Longitude 77°5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
220	215	215	220	240	275	300	355	320 <sub>F</sub>	265	245	235	1
220	220	215	220	240	260	270	260	255	240	220	245	2
215	210	210 <sub>II</sub>	220	235	260	300	300 <sub>F</sub>	260	235	255	265	3
215	215	220	230	240	270	325	340 <sub>F</sub>	300 <sub>F</sub>	300 <sub>F</sub>	280 <sub>F</sub>	265 <sub>F</sub>	4
220	220	215	235	250	270	315	380 <sub>F</sub>	300 <sub>F</sub>	250 <sub>F</sub>	280	290 <sub>F</sub>	5
210	225	235	235	245	270	255	265	355	420	F	375	6
220	A	230 <sub>II</sub>	A	A	265	300	305	285	255	260	250	7
210	210	210	215	235	270	305	310	250	245	250	245	8
200	195 <sub>II</sub>	210	220	240	270	300	300	275	270	260	260	9
205	220	210	225	240	270	320	400	F	310 <sub>F</sub>	280 <sub>F</sub>	245	10
B	215	215	220	250	260	320	380	F	F	240	240	11
205	215	220	235	240	270	355	F	F	380 <sub>F</sub>	F	225	12
220	220	220	220	250	280	360	440	F	300	240	250	13
220	220	220	230	240	280	355	F	F	340	340	285	14
220	220	220	230	240	280	340	400	360	280	240	225	15
235	225	215 <sub>II</sub>	C	250	285	360	F	F	C	260	240	16
220 <sub>II</sub>	220	225	240	250	280	375	520 <sub>F</sub>	F	F	300	245	17
230	225	220	230	250	290	320	320	325	295	280	270	18
230	220	225	240	240	280	340	F	F	340 <sub>F</sub>	280	245	19
220	215	220	235	255	280	350	C	F	345 <sub>F</sub>	270 <sub>F</sub>	235	20
220	220	220	230	250	280	360	440 <sub>F</sub>	440 <sub>F</sub>	300	240	265	21
220	220	210	230	240	270	320	400 <sub>F</sub>	360 <sub>F</sub>	300 <sub>F</sub>	275	240	22
220	215	220	A	A	280	325	380 <sub>F</sub>	420 <sub>F</sub>	340 <sub>F</sub>	260 <sub>F</sub>	260	23
200	200	200 <sub>II</sub>	225	245	270	325	400 <sub>F</sub>	400 <sub>F</sub>	400 <sub>F</sub>	260 <sub>F</sub>	300 <sub>F</sub>	24
220	220	225	240	260	300	360	410	460	260	240	280	25
220	220	235	240	250	260	280	260	260	235	240	230	26
C	C	C	235	C	C	C	C	C	C	C	C	27
200 <sub>II</sub>	220	220	240	250	265	315	345	260	230	235	240	28
220	225	220	235	260 <sub>B</sub>	275	310	335	270	240	250	250	29
205 <sub>II</sub>	220	220 <sub>II</sub>	220 <sub>II</sub>	250	275	300	280	240	240	255	260	30
215 <sub>II</sub>	215	220	235 <sub>II</sub>	255	265	310	360 <sub>F</sub>	340 <sub>F</sub>	265 <sub>F</sub>	240	225	31
215	215	220	230	245	275	320	360	325	290	260	255	Mean
220	220	220	230	250	270	320	360	320	280	260	250	Median
29	29	30	28	28	30	30	25	21	27	28	30	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : h'F

Unit : Km.

Month : October 1960

TABLE 41—contd.

Ionospheric Data

75°0'E Mean Time

Latitude 10°2' N.

Longitude 77°5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	235	220	u225F	u310F	F	u310F	255	235	230	220	220	220
2	230	225	220	260	300	305	255	235	220	215	215	215
3	250	240	240	215	210	240	245	225	225	215	200	205
4	240	230	235	230	235	260	255	240	230	220	215H	205
5	u300F	u300F	u300F	u250F	245F	u245F	260	245	235	220H	215	220H
6	245	230	225	215	E	305	255	235	225	200	200	u220B
7	370	270	270	430	265	220	260	260	245	225	C	225
8	260	240	235	220	240	310	245	230	220	205	210	210
9	240	235	225	235	230	245	250	225	205H	200H	200H	200
10	245	230	230	225	235	280	250	230	225	210	200	210
11	235	235	240	235	220	240	240	235	220	200	B	B
12	230	220	245	240	255	265	250	240	220	220	200	205
13	240	240	245	260	260	260	255	240	225	220	215	220
14	230	230	240	240	235	235	250	240	220	210	200	230
15	230	230	235	250	260	275	260	240	235	215	210	210
16	250	260	260	240	240	290	260	240	225	225	200	220
17	240	235	240	250	250	270	270	245	225	220	220	220
18	240	240	240	240	260	260	255	240	230H	225	220	220
19	255	245	250	260	295	300	260	240	230	220	210	220
20	240	235	230	245	260	260	255	235	230	220	210	215
21	240	235	220	230	240	280	260	240	230	220	200	210
22	240	260	240	240	240	240	260	240	225	215	200	220
23	C	C	C	C	C	C	255	240	220	210	220	210
24	260	260	240	230	240	260	260	240	220	220	200	200
25	u320F	300	260	250	240	260	260	240	230	220	205	220
26	320	255	260	280	250	320	265	250	240	200H	220	220
27	250	C	C	245	240	235	260	C	C	C	C	C
28	C	C	C	C	C	C	C	245	225	C	220	215
29	280	290	250	235	225	240	255	240	225	220	215H	210
30	245	230	220	220	260	285	260	235	230	220H	220	220H
31	240	C	260	265	250	240	260	245	225	220H	220H	220
Mean	255	245	240	250	245	265	255	240	225	215	210	215
Median	240	235	240	240	240	260	255	240	225	220	210	220
Count	29	27	28	29	28	29	30	30	30	29	28	29

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km.

Month : October 1960

TABLE 4I—contd.

Ionospheric Data

75°0'E Mean Time

Latitude 10°2' N.

Longitude 77°5' E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
220	215	220	230	255	C	340	U360F	285F	255	235	235	1
215	210	220	225	255	280	270	260	235	225	225	255	2
220	215H	210	230	250	275	310	U280F	240	245	265	265	3
220	225	220	235	260	290	U380F	U330F	U315F	U275F	U285F	U280F	4
220	235H	220H	240	260	285	U360F	U360F	U295F	U275F	300F	270	5
220	230	240	240	260	270	255	320	410	440F	405	365	6
U240A	240	A	A	260	275	305	300	270	250	270	250	7
205	210	215	220	250	280	320	280	240	240	250	240	8
200	200	220	235	260	280	320	280	270	270	255	270	9
U220B	210	215	230	255	285	365	430	340F	340F	250	250	10
200	215	220	255	260	285	U380F	F	F	F	250	240	11
215	220	220	230	260	290	420	F	F	F	220	250	12
220	200	210	220	260	300	F	420	F	280	240	250	13
220	215	220	240	260	300	405	500	410	F	315	260	14
220	220	220	220	265	300	385	F	325	260	225	240	15
220	220	C	C	265	310	F	F	F	C	250	240	16
C	225	225	240	265	305	460	F	F	340	260	235	17
230	220	225	240	270	300	320	325	310	280	275	260	18
220	225	230	240	260	300	F	F	F	U295F	260	240	19
215	210	225	235	270	300	F	F	U340F	F	245	240	20
220	220	220	240	260	300	400F	500F	400F	235	245	240	21
220	220	220	240	260	280	380F	400F	U280F	280	240	C	22
220	210	240	A	C	300	F	U400F	U410F	U320F	280	260	23
210	200H	C	245	260	280	U80	U430F	400F	300	U260F	300	24
220	220	235	C	270	C	420	460F	360	240	260	300	25
230	220	230	240	260	280	280	260	240	235	235	240	26
C	C	C	C	C	C	C	C	C	C	C	C	27
200H	220H	220H	245	265	280	340	310	235	230	250	240	28
220	220	220H	245	265	280	340	300	240	250	250	245	29
215H	205H	225	240	260	290	300	250	240	250	260	245	30
215	220H	220H	240	255	285	340	U355F	U300F	260	230	235	31
220	215	220	235	260	290	350	355	310	275	260	255	Mean
220	220	220	240	260	285	340	330	300	260	250	250	Median
29	30	27	26	29	28	25	23	24	25	30	29	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E  
Unit : Km.  
Month : October 1960

TABLE 42  
Ionospheric Data  
75°0'E Mean Time

Latitude 10°2' N.  
Longitude 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1							..	A	A	A	A	A
2							..	A	A	A	A	A
3							145	A	A	A	A	A
4								A	A	A	A	A
5								A	A	A	A	A
6								110	A	A	A	A
7								120	110	A	C	A
8							135	120	B	120	A	A
9								120	115	A	A	AA
10								120	A	A	A	
11								140	A	A	A	B
12								..	120	A	A	A
13								120	110	A	A	A
14								105H	A	A	A	A
15								115	A	A	A	A
16								A	A	A	A	A
17							130	120	120	115	A	A
18								120	120	120	120	A
19								A	A	A	A	A
20								125	A	A	A	A
21								120	A	A	120	A
22								110	115	110	A	A
23								120	120	120	120	A
24								120	A	A	120	120
25								120	120	120	A	A
26							A	A	A	A	A	A
27							C	120	C	C	C	C
28							O	120	120	115	A	A
29								120	115	A	110	A
30								115	A	A	A	A
31								120	120	115	A	A
Mean							..	120	115	115	120	..
Median							..	120	120	120	120	..
Count							3	22	12	8	5	1

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km.

Month : October 1960

TABLE 42—Contd  
Ionospheric Data  
75°0'E Mean Time

Latitude 10°2' N.

Longitude 77°5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A								1
A	A	A	A	A	A							2
A	A	A	A	A								3
A	A	A	A	120								4
			120	A								5
A	115	115	110	110	125							6
A	A	110	A	A	A							7
A	A	A	120	120								8
A	A	A	120	120								9
A	A	A	115	115								10
B	A	A	A	A								11
A	A	A	A	A								12
A	A	A	A	A								13
A	110	A	A	A	A							14
												15
A	A	A	C	A								16
A	120	120	120	120	130							17
120	120	120	120	A	A							18
A	A	A	A	A								19
A	A	115	A	A								20
A	120	120	120	120								21
A	115	110	120	120								22
A	120	120	A	A	A							23
A	120	115	120	A	A							24
A	120	120	120	A								25
A	115	120	120	120	120							26
C	C	C	120	C	C							27
A	110	120	120	130								28
A	A	110	120	B								29
115	120	120	120	120								30
120	120	115	120	120								31
..	115	115	120	120	..							Mean
..	120	120	120	120	..							Median
3	13	15	17	12	3							Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E  
Unit : Km.  
Month : October 1960

TABLE 42—*contd.*  
Ionospheric Data  
75° E Mean Time

Latitude 10° 2' N.  
Longitude 77° 5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							..	A	A	A	A	A
2							..	A	A	A	A	A
3							125	A	A	A	A	A
4							A	A	A	A	A	A
5							120	A	A	A	A	A
6							120	A	A	A	A	B
7							..	A	A	A	C	A
8						125	130	B	120	A	A	A
9							120	120	110	A	A	A
10								120	A	A	A	A
11								110	A	A	B	B
12								B	115	A	A	A
13								115	A	A	A	A
14								A	A	A	A	A
15								A	A	A	A	A
16								A	A	A	A	A
17							120	120	120	120	120	120
18								120	120	120	120	120
19								A	A	A	A	A
20								120	A	A	A	A
21							A	120	A	120	120	A
22							..	110	110	A	A	A
23							130	120	120	A	A	A
24							120	120	A	A	120	120
25							120	120	120	A	A	A
26							A	A	A	A	A	A
27							..	C	C	C	C	C
28							..	120	115	C	120	A
29							120	120	110	115	A	A
30							120	115	A	A	A	120
31							130	120	120	A	A	A
Mean						..	125	120	115	..	..	..
Median						..	120	120	120	..	..	..
Count						1	12	16	11	4	4	4

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km.

Month : October 1960

TABLE 42—*contd.*

Ionospheric Data

75°E Mean Time

Latitude 10°2' N.

Longitude 77°5' E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	A	A	..								1
A	A	A	A	A								2
A	A	A	A	A								3
A	A	A	A	A								4
A	A	A	A	..								5
A	120	115	110	115								6
A	115	A	A	A								7
A	A	115	115	120								8
A	A	120	120	..								9
B	A	A	115	..								10
A	A	A	A	..								11
A	A	A	A	A								12
A	A	A	A	A								13
A	A	A	A	A								14
A	A	A	A	..								15
A	A	C	C	A								16
C	120	120	120	130F								17
120	120	120	125F	A								18
A	A	A	A	A								19
A	120	A	A	..								20
A	120	120	120	..								21
A	110	120	120	120								22
A	120	120	A	C								23
120	115	C	120	A								24
A	120	120	C	A								25
120	115	A	120	120								26
C	C	C	C	C								27
115	120	120	120	140								28
120	110	115	B	B								29
A	120	120	F	..								30
120	120	115	120	..								31
120	120	120	120	125								Mean
120	120	120	120	120								Median
6	15	13	12	6								Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es  
Unit : Km.  
Month : October 1960

TABLE 43  
Ionospheric Data  
75° E Mean Time

Latitude 10.2° N.  
Longitude 77.5° E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								115	100	100	100	100
2								501	100	100	100	100
3							G	110	100	100	100	100
4							130	115	110	105	100	100
5		110						110	105	100	100	100
6								105	105	100	100	100
7								G	105	105	C	100
8	100	110					G	G	110	100	100	100
9							115	G	105	100	100	100
10								G	100	100	100	100
11								G	100	100	100	B
12								G	G	100	100	100
13								G	100	100	100	100
14								105	100	100	100	100
15								G	100	100	100	100
16			130					100	100	100	100	100
17							G	115	120	110	100	100
18								115	110	105	100	100
19								105	100	100	100	100
20								G	100	100	100	100
21								100	100	100	100	100
22	140							100	100	100	100	100
23	C	C	C	C	C	C		100	100	100	100	100
24								100	100	100	100	100
25	130							110	100	100	100	100
26	110				100		100	105	100	100	100	100
27			C				C	G	C	C	C	C
28	G	C	C	C	C	C	C	105	105	100	100	100
29		115	100					G	100	100	100	100
30							135	100	100	100	100	100
31				110				G	120	105	100	100
Mean	..	..	..	..	..	..	..	105	105	100	100	100
Median	..	..	..	..	..	..	..	105	100	100	100	100
Count	4	3	2	1	1	..	4	19	29	30	29	260

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

57<sup>I</sup>

Characteristic : h'E<sub>s</sub>  
 Unit : Km.  
 Month : October 1960

TABLE 43—Contd.  
 Ionospheric Data  
 75°E Mean Time

Latitude 10°2' N.  
 Longitude 77°5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
100	100	100	100	105								1
100	100	100	100	105	110							2
100	100	100	100	105	115							3
100	105	105	110	115	120							4
100	100	105	105	110					125	115	120	5
										135	135	
100	G	100	105	105	115							6
100	125	105	105	115	120			140	125	115	110	7
100	100	100	110	110	115							8
100	100	100	110	110	120				115			9
100	100	100	105	105						125		10
100	100	100	100	100								11
100	100	100	100	105							115	12
100	100	100	100	105								13
100	100	100	100	100	100					115	110	14
100	100	100	100	100								15
100	100	100	G	110					G			16
100	105	105	115	120	125							17
105	105	105	110	115	100						120	18
100	100	100	100	100						120		19
100	100	100	100	100			C					20
100	100	105	105	110							120	21
100	100	100	100	110								22
100	100	100	110	120	120						120	23
100	100	100	100	100	100				120		135	24
100	100	100	105	105							110	25
100	100	100	100	110	110							26
G	C	C	120	C	C	C	C	C	C	C	C	27
100	100	100	105	115	125							28
100	100	100	100	100	105							29
100	100	100	100	100	100						100	30
100	100	100	100	115	120							31
100	100	100	105	110	115	..	..	..	..	120	120	Mean
100	100	100	100	105	115	..	..	..		120	120	Median
30	29	30	30	30	17	..	..	1	4	6	11	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

57<sup>I</sup>



Characteristic : h'Es  
Unit : Km.  
Month : October 1960

TABLE 43—*contd.*  
Ionospheric Data  
75° E Mean Time

Latitude 10°2' N.  
Longitude 77°5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								105	100	100	100	100
2								100	100	100	100	100
3							G	100	100	100	100	100
4							125	110	105	100	100	100
5	120		120				120	110	100	100	100	100
6							G	105	105	100	100	B
7								105	105	100	C	100
8	100	110				G	G	170	G	100	100	100
9							G	G	100	100	100	100
10				105				100	100	100	100	100
11								G	100	100	B	100
12								B	100	100	100	100
13		110						100	100	100	100	100
14								100	100	100	100	100
15								100	100	100	100	100
16								100	100	100	100	100
17							G	115	115	105	100	100
18								115	105	100	100	100
19								100	100	100	100	100
20								100	100	100	100	100
21							160	105	100	100	100	100
22								100	100	100	100	100
23							G	110	105	100	100	100
24							G	100	100	100	100	100
25	125		155				G	100	100	100	100	100
26	110			100	100		105	100	100	100	100	100
27								C	C	C	C	C
28								105	100	C	100	100
29		110					G	100	100	100	100	100
30	130						120	G	100	100	100	100
31							120	120	110	100	100	100
Mean	115	..	..	..	..	..	125	105	100	100	100	100
Median	120	..	..	..	..	..	120	100	100	100	100	100
Count	5	3	2	2	1	..	6	26	29	29	28	29

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es  
Unit : Km.  
Month : October 1960

TABLE 43—*contd.*  
Ionospheric Data  
75° E Mean Time

Latitude 10.2° N.  
Longitude 77.5° E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
100	100	100	100	105								1
100	100	100	100	110								2
100	100	100	100	110								3
100	105	110	115	115					120	120	120	4
100	105	105	110	115					135	120		5
100	100	105	105	110								6
100	130	110	115	110	120			135	130	105	100	7
100	100	105	110	110								8
100	100	105	110	115				115				9
100	100	100	105	110	100						115	10
100	100	100	100	115								11
100	100	100	100	110							105	12
100	100	100	100	100								13
100	100	100	100	105					115	115	115	14
100	100	100	100	105								15
100	100	C	C	115								16
C	100	115	120	120								17
100	105	110	110	110	105				120	135		18
100	100	100	100	100								19
100	G	100	100	..								20
100	100	105	105	115					120	110	140	21
100	100	100	110	115								22
100	100	100	110	C								23
100	100	C	100	100	100				110	140	130	24
100	100	G	C	120	C						110	25
100	100	100	110	110								26
C	C	C	C	C								27
100	100	100	110	120								28
100	100	100	100	100								29
100	100	100	100	100						120	100	30
100	100	100	110	120		120						31
100	100	100	105	110	..	..	..	..	120	120	115	Mean
100	100	100	105	110	..	..	..	..	120	120	115	Median
29	29	28	28	27	4	1	..	2	7	8	9	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M3000) F<sub>2</sub>

Unit : —

Month : October 1960

TABLE 44  
Ionospheric Data  
75°E Mean Time

Latitude 10°2' N.

Longitude 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	3.00	3.05	3.20	F	F	F	U2.85F	2.90F	2.50	2.45	2.35	2.30
2	3.10	3.20	3.25	3.20	2.80	2.70	2.85	2.80	2.60	2.45	2.45	2.30
3	3.00	3.00	3.00	3.15	3.30	3.55	3.05	3.05	2.70	2.40	2.45	2.40
4	3.15	3.25	3.30	3.15	3.20	3.25	3.10	3.10	2.70	2.30	2.35	2.35
5	F	F	F	F	2.95F	F	F	F	2.35H	2.40	2.35	2.30
6	U2.90s	3.00	3.20	3.30	E	R	3.00	3.00	2.50	2.20	2.55	2.30
7	2.15	2.35	2.60	2.05	2.45	2.90	2.90	2.90	2.40H	2.35	C	2.40
8	3.05	3.00	3.15	3.15	3.55	E	3.05	3.20	3.00	2.90	2.70	2.40
9	3.05	3.10	3.15	3.20	3.10	3.25	3.20	3.20	2.90	2.45	2.25H	2.20
10	2.95	3.10	3.05	3.25	3.45	3.20	3.05	3.05	2.75	2.40	2.30	2.25
11	3.00	F	U3.15F	3.10	F	U3.25F	3.20	3.15	2.90	2.50	2.10H	2.25
12	3.00	3.15	3.10	3.15	3.20	3.10	3.05	3.10	2.95	2.65	2.30	2.20
13	F	3.10	F	F	F	F	U3.15R	3.00	2.80	2.50	2.20	2.20
14	F	U3.05F	3.10	3.10F	F	3.30	2.95	2.95	2.65	2.30	2.35	2.25
15	F	U3.20F	3.20	3.30	F	F	F	3.00	2.70	2.35	2.15	2.20
16	3.05	3.00	2.95	3.00	3.20	3.20	2.90	2.75	2.55	2.40	2.30	2.30
17	F	F	3.10	F	3.25	3.25	3.00	2.85	2.45	2.35	2.40	2.40
18	3.15	F	3.10	U3.20F	U3.30F	FH	U3.30F	3.00	2.75	2.55	2.25	2.30
19	3.00	3.00	3.00	3.10	2.90	2.85	2.90	2.70	2.50	2.40	2.40	2.25
20	2.90	3.00	3.10	3.10	3.00	3.00	3.20	3.00	2.80	2.50	2.30	2.35
21	F	3.10	3.20	3.25	3.30	3.20	3.10	3.05	2.70	2.35	2.40	2.30
22	3.00	3.05	3.15	F	3.10	3.30	3.20	3.10	2.75	2.40	2.30	2.30
23	C	C	C	C	C	C	3.15	3.10	2.70	2.25H	2.40	2.40
24	F	F	F	3.20	3.30	F	3.30	3.20	3.00	2.55	2.30	2.40
25	F	F	F	F	3.25	F	F	2.90	2.65	2.40	2.40	2.40
26	2.80	2.90	2.90	2.95	2.90	3.00	2.70H	2.65H	2.80	2.60	2.55	2.40
27	3.10	3.10	C	3.20	3.30	3.40	C	3.25	C	C	C	C
28	C	C	C	C	C	C	C	3.00	2.80	2.45	2.60	U2.45s
29	3.00	U2.85s	2.95	U3.05s	3.30	3.50	3.15	3.25	U2.90s	2.60	2.40	2.40
30	3.05	3.30	3.40	3.45	3.20	3.10	3.05	U2.90s	2.90	2.70	2.50	2.40
31	3.15	3.30	3.25	3.05	U3.10s	3.30	3.10	3.05	2.80	2.50	2.30	2.40
Mean	3.00	3.05	3.10	3.10	3.15	3.20	3.05	3.00	2.70	2.45	2.35	2.30
Median	3.00	3.05	3.10	3.15	3.20	3.20	3.05	3.00	2.70	2.40	2.35	2.30
Count	21	23	24	23	23	20	26	30	30	30	29	30

Sweep 1.0 to 25.0 Mc. in 27 Seconds.

Characteristic : (M3000) F2

TABLE 44—Contd.

Latitude 10° 2' N.

Unit : —

Ionospheric Data

Longitude 77° 5' E.

Month : October 1960

75° E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
2.40	2.35	2.25	2.20	2.20	2.20	2.10	2.10	u2.10 <sub>F</sub>	u2.35 <sub>F</sub>	F	u3.00 <sub>F</sub>	1
2.30	2.30	2.30	2.30	2.40	2.35	2.20	2.50	2.55	2.70	2.90	3.00	2
2.40	2.40	2.40	2.40	2.40	2.30	2.20	2.25	2.40	2.80	2.90	3.00	3
2.35	2.35	2.40	2.40	2.45	2.40	2.15	F	F	u2.60 <sub>F</sub>	F	F	4
2.35	2.30	2.40	2.40	2.45	2.40	2.20	2.15	F	F	2.50	F	5
2.35	2.35	2.40	2.30	2.15	2.05 <sub>H</sub>	2.40	2.50	2.10	2.00	2.00	2.15	6
2.30	2.40	2.35	2.30	2.30	2.40	2.40	2.40	2.55	2.70	2.80	2.95	7
2.20	2.25	2.35	2.45	2.40	2.40	2.35	2.30	2.60	2.80	2.90	3.10	8
2.20	2.40	2.30	2.20	2.15	u2.25 <sub>s</sub>	2.30	2.35	2.55	2.70	2.85	2.95	9
2.25	2.25	2.20	2.20	2.20	2.30	2.25	2.20	u2.15 <sub>F</sub>	F	F	2.90 <sub>F</sub>	10
2.30	2.40	2.40	2.40	2.45	2.40	2.25	F	F	F	F	F	11
2.20	2.20	2.20	2.20	2.25	2.25	2.15	F	F	F	F	F	12
2.25	2.25	2.20	2.10	2.10	2.20	2.10	F	F	F	F	F	13
2.25	2.30	2.30	2.20	2.10	u2.10 <sub>s</sub>	2.00	u2.00 <sub>F</sub>	F	F	F	F	14
2.30	2.30	2.30	2.25	2.10	u1.95 <sub>s</sub>	2.10	2.10	2.15	u2.50 <sub>s</sub>	u2.65 <sub>F</sub>	3.05	15
2.15	2.20	2.30	C	u2.20 <sub>s</sub>	2.10	2.05	F	F	C	2.75	F	16
2.40	2.40	2.25	2.25	2.30	2.30	u2.20 <sub>s</sub>	F	F	F	F	F	17
2.35	2.30	2.30	2.35	2.40	2.45	2.40	2.40	2.50	2.60	2.70	2.85	18
2.30	2.30	2.35	2.30	u2.35 <sub>s</sub>	2.30	2.10	u2.40 <sub>F</sub>	F	F	2.65	2.80	19
2.35	2.50	2.50	2.50	2.50	2.35	u2.10 <sub>R</sub>	C	F	F	F	F	20
2.35	2.40	2.50	2.50	2.45	2.40	2.15	u2.10 <sub>s</sub>	F	F	F	F	21
2.35	2.40	2.40	2.35	2.40	2.45	2.30	F	F	F	F	F	22
2.45	2.45	2.40	2.50	2.50	2.50	2.40	F	F	F	F	F	23
2.50	2.50	2.50	2.60	2.55	2.60	2.45	2.25	F	F	F	F	24
2.30	2.45	2.50	2.50	2.45	2.30	2.10	u2.05 <sub>s</sub>	F	F	F	F	25
2.40	2.40	2.50	2.40	2.25	2.40	2.50	2.65	2.75	2.90	2.95	3.05	26
C	C	C	2.35	C	C	C	C	C	C	C	C	27
2.50	2.50	2.50	2.45	2.35	2.40	2.40	2.25	2.60	2.90	3.05	3.05	28
2.45	2.50	2.50	2.55	2.50	2.40	J2.30 <sub>s</sub>	2.30	2.55	2.75	2.85	3.00	29
2.40	2.40	2.50	2.55	2.55	u2.40 <sub>s</sub>	2.35	2.50	2.80	3.00	3.10	u3.15 <sub>s</sub>	30
2.45	2.50	2.45	2.50	2.40	2.35	S	2.25	F	2.50	u2.90 <sub>s</sub>	3.10	31
2.35	2.35	2.35	2.35	2.35	2.30	2.25	2.30	2.45	2.65	2.80	2.95	Mean
2.35	2.40	2.40	2.40	2.40	2.35	2.20	2.25	2.55	2.70	2.85	3.00	Median
30	30	30	30	30	30	29	21	14	15	16	16	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 Seconds.

Characteristic : (M3000) F<sub>2</sub>

Unit : —

Month : October 1960

TABLE 44—*contd.*

Ionospheric Data—

75 E Mean Time

Latitude 10° 2' N.

Longitude 77° 5' E.

Date	0030	0130	0230	0330	0430 <sup>†</sup>	0530	0630	0730	0830	0930	1030	1130
1	3.10	3.20	F	F	F	F	u2.95 <sub>F</sub>	2.70	2.40	2.45	2.20	2.40
2	3.10	3.25	3.30	2.90	2.65	2.80	2.90	2.70	2.50	2.50	2.35	2.30
3	3.10	3.00	3.00	3.30	3.50	2.70 <sub>H</sub>	3.10	2.90	2.55	2.35	2.50	2.35
4	3.15	3.25	3.25	3.25	3.20	3.30	3.15	2.95	2.45	2.40	2.30	2.35
5	F	F	F	2.85	u3.20 <sub>F</sub>	u3.00 <sub>F</sub>	F	F	2.40	2.30	2.25	2.40
6	3.00	3.20	3.30	2.70 <sub>H</sub>	E	2.50	3.05	2.70	2.30	2.40	2.50	2.30
7	2.25	2.55	2.40	2.05	2.45	3.00 <sub>H</sub>	2.90	2.60	2.10 <sub>H</sub>	2.40	C	2.25
8	2.95	3.00	3.10	3.05	3.45	2.50	3.20	3.10	3.00	2.85	2.55	2.35
9	3.10	3.15	3.15	3.25	3.15	3.10	3.20	3.10	2.75	2.20 <sub>H</sub>	2.35	2.15
10	3.05	3.05	3.20	3.30	3.45	2.60	3.20	2.90	2.60	2.30	2.30	2.25
11	F	F	3.00	F	F	3.05 <sub>F</sub>	3.25	3.10	2.70	2.30	u2.20 <sub>R</sub>	2.30
12	3.15	F	3.05	3.20	3.10	2.85	3.15	3.05	2.80	2.50	2.10	2.15
13	F	F	3.15 <sub>F</sub>	F	F	F	3.15	2.90	2.70	2.35	2.20	2.20
14	F	3.15	3.10	3.20	u3.20 <sub>F</sub>	3.30	3.00	2.80	2.50	2.20	2.30	2.20
15	F	F	F	F	F	F	3.05 <sub>F</sub>	2.80	2.55	2.15	2.20	2.25
16	3.00	3.00	2.90	3.10	3.20	3.00	2.75	2.65	2.50	2.35	2.30	2.25
17	F	3.05	u3.30 <sub>F</sub>	3.20	3.30	2.90	3.00	2.65	2.35	2.40	2.40	2.30
18	3.10	3.10	3.10	F	F	F	3.15	2.85	2.60	2.45	2.10	2.35
19	u3.00 <sub>s</sub>	3.00	3.05	2.95	2.90	2.95	2.80	2.50	2.50	2.50	2.30	2.30
20	2.90	3.10	3.15	3.00	2.95	3.20	3.15	2.90	2.70	2.40	2.35	2.35
21	3.00	3.15	3.25	3.30	3.10	2.85	3.10	2.95	2.55	2.30	2.40	2.30
22	3.05	3.10	3.10	3.20	3.25	3.15	3.20	2.95	2.55	2.40	2.40	2.30
23	C	C	C	C	C	C	3.20	3.00	2.40	2.40	2.40	2.50
24	F	F	F	3.30	3.40	u3.15 <sub>F</sub>	3.30	3.10	2.70	2.30	2.35	2.40
25	F	F	3.20	F	F	F	F	2.75	2.50	2.40	2.40	2.30
26	2.80	2.95	2.90	2.95	3.10	2.80	2.60 <sub>H</sub>	2.80	2.70	2.65	2.45	2.40
27	3.10	C	C	3.25	3.30	3.40	3.20	C	C	C	C	C
28	C	C	C	C	C	C	C	2.90	2.65	C	2.45	2.50
29	2.85	2.85	u3.05 <sub>s</sub>	3.20	u3.40 <sub>s</sub>	3.25	3.25	3.10	2.80	2.40	2.40	2.50
30	3.20	3.30	3.40	3.35	3.15	2.80	3.00	2.90	2.85	2.60	2.40	2.40
31	3.20	C	u3.20 <sub>s</sub>	2.90	3.05	3.05	3.15	2.90	2.65	2.35	2.30	2.50
Mean	3.00	3.05	3.10	3.10	3.15	2.95	3.10	2.85	2.60	2.40	2.35	2.35
Median	3.05	3.10	3.10	3.20	3.20	3.00	3.15	2.90	2.55	2.40	2.35	2.30
Count	21	20	24	23	22	24	28	29	30	29	29	30

Sweep 1.0 Mc. to 25.0 Mc. in 27 Seconds.

Characteristic : (M3000) F<sub>2</sub>

Unit : —

Month : October 1960

TABLE 44—contd.

Ionospheric Data

75°E Mean Time

Latitude 10.2° N.

Longitude 77.5° E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.40	2.35	2.20	2.20	2.20	C	2.10	2.10	2.20	F	F	3.00	1
2.30	2.30	2.30	2.30	2.35	2.20	2.40	2.55	2.70	2.80	3.05	3.00	2
2.40	2.40	2.45	2.40	2.35	2.30	2.20	2.35	2.60	2.90	3.00	3.10	3
2.30	2.35	2.40	2.45	2.45	2.25	2.05	2.25	F	u2.80F	F	F	4
2.40	2.35	2.45	2.40	2.40	2.35	2.15	2.25	F	F	2.60	F	5
2.30	2.40	2.35	2.25	2.10	2.00H	2.40	2.30	2.00	2.00	2.05	2.20	6
2.30	2.40	2.30	2.30	u2.40s	2.50	2.40	2.50	2.60	2.75	2.85	3.00	7
2.30	2.35	2.40	2.40	2.40	2.40	2.30	2.45	2.75	2.85	3.00	3.10	8
2.30	2.30	2.25	2.15	2.15	u2.25s	2.30	2.50	2.60	2.75	2.95	2.90	9
2.30	2.20	2.20	2.20	2.25	2.30	2.20	2.10	F	F	2.80	2.90	10
2.30	2.40	2.40	2.45	2.40	2.35	2.15	F	u2.40F	F	F	F	11
2.20	2.20	2.20	2.25	2.30	2.25	2.05F	F	F	F	F	F	12
2.25	2.25	2.20	2.10	2.10	2.20	F	F	F	F	F	u3.05F	13
2.30	2.30	2.25	2.15	2.10	2.20	u2.00s	F	F	F	F	F	14
2.30	2.30	2.30	2.15	u2.00s	2.15	2.10	u2.20F	F	F	2.80	3.10	15
2.20	2.25	C	C	2.20	2.10	F	F	F	C	u2.80s	F	16
C	2.25	2.25	2.25	2.30	2.20	1.95	F	F	F	F	3.00	17
2.30	2.30	2.35	2.25	2.45	2.40	2.40	2.45	2.55	2.65	2.70	2.90	18
2.30	2.30	2.30	2.30	2.30	2.20	2.30	F	F	2.60	2.75	2.85	19
2.45	2.50	2.50	2.50	2.40	u2.20R	F	F	F	F	F	u2.80F	20
2.40	2.40	2.45	2.50	2.40	2.30	2.10	F	F	F	F	F	21
2.40	2.40	2.40	2.40	2.45	2.40	2.25	F	F	F	F	C	22
2.40	2.45	2.50	2.50	C	2.40	2.20	F	F	F	u2.90F	F	23
2.50	2.50	C	2.55	2.70	2.60	u2.40s	u2.25F	F	F	F	F	24
2.40	2.50	2.55	C	u2.45s	C	2.10	F	F	F	F	u2.90F	25
2.40	2.50	2.45	2.30	2.25	2.45	2.50	2.70	2.85	3.00	2.95	3.10	26
C	C	C	C	C	C	C	C	C	C	C	C	27
2.50	2.50	2.45	2.40	u2.40s	2.35	2.25	2.40	2.80	3.00	3.05	3.00	28
2.50	2.50	2.55	2.50	2.50	2.25	2.25	2.40	2.65	2.80	2.90	3.05	29
2.40	2.45	2.55	2.55	2.50	2.40	2.35	2.60	2.90	3.00	3.10s	3.15	30
2.45	2.45	2.50	2.45	2.35	2.35	2.25	2.25	u2.50F	2.60	2.90	3.20	31
2.35	2.35	2.35	2.35	2.35	2.30	2.25	2.35	2.60	2.75	2.85	2.95	Mean
2.30	2.40	2.40	2.35	2.35	2.30	2.25	2.40	2.60	2.80	2.90	3.00	Median
29	30	28	28	29	28	27	18	14	14	18	20	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 Seconds.

Characteristic : fo F<sub>2</sub>  
Unit : Mc  
Month : November 1960

TABLE 45  
Ionospheric Data  
75°E Mean Time

Latitude 10°2' N.  
Longitude 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	10.2	9.6	9.0	7.9	7.0	5.8	7.5	10.3	10.8	10.7	10.3	10.6
2	9.8	9.1	6.7	4.5	3.7	2.7	6.3	9.7	11.4	11.4	11.2	11.8
3	u9.8s	9.0	8.0	6.1	4.1	3.2	6.5	10.1	C	C	C	11.8
4	11.2	10.6	7.6	5.2	3.2	2.6	6.3	10.1	11.9	11.4	11.3	11.1
5	F	C	C	C	C	C	G	C	C	C	11.0	11.4
6	11.1	10.7	8.5	7.4	5.1	3.1	6.4	10.0	11.4	11.4	11.3	11.0
7	11.8	11.7	9.7	7.2	6.0	4.4	6.8	10.2	12.7	13.4	12.8	11.7
8	10.5	10.1	8.2	6.7	4.8	3.2	6.4	9.7	12.0	12.4	11.7	11.4
9	u10.4F	9.7	8.0	5.7	3.5	2.6	6.2	9.8	11.7	12.7	13.1	13.0
10	u9.7F	u9.4F	8.6F	6.7F	4.4	3.1	6.3	9.5	11.0	11.6	11.7	11.8
11	u11.0c	u11.8c	u10.8c	u7.2c	6.0	4.6	6.6	u10.1C	11.8	12.2	12.9	12.6
12	12.4	11.5	8.6	u7.0s	4.5	3.3	6.6	10.5	11.6	12.4	12.6	C
13	10.3	8.9	7.9	6.6	6.8	E	5.5	9.2	9.5	11.0	11.6	C
14	3.4	3.5	3.0	j2.0R	2.6	E	6.7	10.8	12.4	13.0	14.0	14.2
15	8.9	7.9	7.8	6.2	5.4	5.2	6.8	10.0	13.0	13.0	11.8	11.7
16	u11.2F	12.1	11.1	10.8	9.8	6.9	7.6	10.0	11.4	13.8	11.4	10.3
17	7.8	6.5	5.5	4.5	4.2	E	6.1	10.1	11.6	11.0	11.0	11.3
18	F	F	8.2	7.1	7.6	6.4	7.1	9.8	11.5	11.1	10.5	10.3
19	F	9.0	8.4	F	5.4	E	5.5	8.7	9.4	9.5	9.4	10.1
20	8.6	7.8	6.5	5.3	4.2	2.9	5.7	9.3	10.7	10.6	9.6	9.5
21	8.4	7.8	6.4	5.3	4.8	3.5	5.9	9.4	11.3	10.4	9.3	9.3
22	10.9	9.8	u10.2R	9.9	6.9	u4.0R	6.3	9.3	11.1	11.6	12.0	12.7
23	10.0	9.9	7.5	4.0	R	E	5.3	8.4	9.6	10.1	10.5	10.8
24	8.7	8.6	8.1	6.2	3.7	E	5.4	8.5	10.6	10.8	9.7	9.4
25	7.5	7.4	6.8	6.1	3.7	u2.6R	5.8	9.1	10.5	11.4	13.2	14.2
26	9.1	8.5	7.0	4.5	4.0	u3.7R	6.7	8.5	9.7	C	C	C
27	7.7	8.2	6.5	6.4	5.8	j4.6R	6.1	9.4	11.3	11.0	10.4	10.4
28	8.6	8.4	8.3	7.1	6.1	5.0	5.9	8.4	9.4	9.2	9.4	10.0
29	7.0	7.6	8.0	6.7	5.3	6.9	5.4	9.3	10.0	9.2	9.0	9.0
30	8.8	8.8	8.2	7.4	5.9	3.5	5.7	9.3	11.1	11.2	11.6	11.2
Mean	9.4	9.1	7.9	6.3	5.2	3.9	6.3	9.6	11.1	11.4	11.2	11.2
Median	9.8	9.0	8.0	6.5	5.0	3.2	6.3	9.7	11.4	11.4	11.3	11.2
Count	27	28	29	28	28	29	29	29	28	27	28	27

Sweep 1.0 Mc. to 25.0 Mc. in 27 Seconds.

Characteristic : fo F<sub>2</sub>

Unit : Mc

Month : November 1960

TABLE 45  
Ionospheric Data  
75°E Mean Time

Latitude 10°2' N.

Longitude 77°5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
11.4	12.1	12.2	12.1	11.8	10.8	10.0	9.2	9.2	9.4	9.8	F	1
12.3	12.9	13.7	13.9	14.2	13.9	12.9	F	11.9 <sub>F</sub>	12.8	11.5	9.9	2
11.6	12.4	13.1	13.2	13.4	13.0 <sub>R</sub>	13.2 <sub>R</sub>	13.0	13.7	14.3	13.0	11.9	3
11.3	11.3	11.7	11.9	12.6	13.4	12.2 <sub>R</sub>	12.3 <sub>R</sub>	12.9	13.0 <sub>R</sub>	F	13.9	4
11.6	12.1	12.4	12.9	12.7	12.4	11.5	10.5 <sub>F</sub>	F	13.1	F	11.7	5
10.8	10.9	11.4	11.7	11.6	10.9	9.7	9.0	9.8	10.3	10.4	10.6	6
11.6	11.8	12.3	12.0	11.5	10.8	10.5	9.9	10.6	11.4	11.5	11.0	7
11.0	11.1	11.5	11.8	11.5	11.3	10.0	10.6 <sub>F</sub>	F	F	F	10.4 <sub>F</sub>	8
13.2	13.3	13.2	13.7	13.6	12.8	11.3	10.6 <sub>F</sub>	F	F	F	9.8 <sub>F</sub>	9
12.2	12.7	12.8	12.6	12.4	11.8	10.9	F	11.3 <sub>F</sub>	11.3	10.7	11.0	10
11.9	12.2	12.2	12.4	11.1 <sub>s</sub>	11.6	11.8 <sub>s</sub>	11.8 <sub>s</sub>	C	12.1	11.8 <sub>s</sub>	12.8	11
12.4	12.4	12.4	12.2	11.6	11.6	10.9	9.3	F	F	9.2	11.2	12
C	C	C	11.2	10.8 <sub>H</sub>	12.4	13.5	R	5.6	5.0	4.5	3.1	13
14.0	C	14.2	14.2	13.8	12.6	10.6	9.4	9.0	9.0 <sub>F</sub>	9.0 <sub>F</sub>	10.0	14
12.0	11.9	12.0	12.0	12.0	11.7	11.1	9.9	8.6	F	F	F	15
11.9	11.8	12.6	13.6	13.8	R	R	11.6	11.6	11.7	10.1	9.0	16
11.0	11.0	11.2	11.4	11.7	11.8	11.1	10.1	10.0	10.0 <sub>F</sub>	F	F	17
10.5	10.9	11.0	11.0	11.2	10.3	8.9	10.7 <sub>F</sub>	8.0	F	F	8.1	18
10.6	11.3	11.9	12.6	12.9	R	11.6	10.7	R	9.8	9.8	9.5	19
9.5	10.0	10.8	11.6	C	11.6	11.5	11.2	10.9	11.6	9.9	8.5	20
9.6	10.8	12.1	12.3	12.4	11.8 <sub>s</sub>	10.9	11.8	12.6	11.9	10.6	10.1	21
12.5	13.3	13.7	13.8	13.0 <sub>R</sub>	13.1	R	11.4 <sub>R</sub>	11.0	12.5	10.0	10.3	22
10.6	11.3	11.8	11.8	11.7 <sub>s</sub>	11.4	11.0 <sub>R</sub>	10.8	10.9	10.8	8.9	8.9	23
9.8	10.0	10.7	11.6	11.9	11.8	11.5	10.7	10.5	10.3	9.0	7.8	24
14.5	13.9	13.8	C	C	R	10.7	10.0	9.4	10.0	10.0	10.5	25
11.3	C	C	13.8	C	11.8 <sub>R</sub>	8.8	7.9	7.5	10.9 <sub>F</sub>	7.3	7.6	26
11.2	11.6	12.4	12.8	13.4	12.8	11.7	11.8	11.6	10.8	9.7	9.1	27
11.3	11.4	12.4	12.0	11.8	11.0	8.9	7.8	7.4	10.4 <sub>F</sub>	7.2	6.9	28
9.6	10.0	10.9	11.0	11.3	11.0	10.6	10.3	10.6	9.7	9.6	9.0	29
11.6	12.1	12.1	12.4	11.8	11.3	10.0	9.6	8.8	8.0	7.6	10.7 <sub>F</sub>	30
29	27	28	29	27	27	28	27	24	25	23	27	Count
11.4	11.8	12.2	12.2	11.9	11.8	11.0	10.1	10.6	10.8	9.8	9.9	Median
11.5	11.7	12.2	12.4	12.3	11.9	11.0	10.2	10.1	10.5	9.6	9.6	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : fo F2

Unit : Mc

Month : November 1960

TABLE 45—Contd.

Ionospheric Data

75°E Mean Time

Latitude 10°2' N.

Longitude 77°5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	9.8	9.1	8.5	7.5	C	5.7	8.8	10.7	10.6	10.7	10.4	10.9
2	9.8 <sub>F</sub>	7.8	5.6	4.2	3.0	3.9	8.2	10.7	11.4	11.3	11.6	11.9
3	9.4	8.7	7.1	4.9	3.7	4.2	8.5	11.5	13.3	C	11.6	11.7
4	11.0	9.5	6.2	3.9	2.8	4.0	8.5	11.1	11.7	11.1	11.3	11.2
5	F	C	C	C	C	C	C	C	C	C	11.3	11.5
6	10.8	9.6	8.0	6.3	4.0	4.0	8.4	11.0	11.4	11.3	11.1	10.7
7	12.0	11.2	8.0	6.8	5.2	4.6	8.8	11.6	13.2	13.2	12.3	11.7
8	10.4	9.8	7.3	5.6	4.1	4.0	8.4	11.0	12.7	11.9	11.5	11.5
9	9.7 <sub>F</sub>	9.3	6.7	4.4	3.1	3.9	8.3	11.0	12.3	12.8	13.0	12.8
10	F	9.2 <sub>F</sub>	F	5.7	3.8	4.0	8.2	10.6	11.5	11.5	11.7	11.9
11	11.3 <sub>C</sub>	11.7 <sub>C</sub>	9.3 <sub>C</sub>	6.4 <sub>C</sub>	5.3	4.6	8.5	11.3	12.0	12.9	13.0	11.9
12	12.1	10.0	7.7	5.6	3.7	4.1	8.7	11.4	12.0	12.6	12.4	12.4
13	9.2	8.9	6.8	6.4	F	3.1	7.4	9.4	9.6	12.4	C	C
14	3.7	3.2	2.7	2.2	2.7	3.9	9.2	11.4	12.9	13.4	14.0	14.0
15	8.1	8.3	6.9	5.7	5.5	4.8	8.4	B	13.4	12.6	11.6	11.8
16	F	11.8	11.1	10.4	8.0	6.1	9.1	11.0	13.4	12.5	10.4	11.6
17	7.1	5.9	4.9	4.0	R	E	8.4	11.0	11.7	11.0	11.2	11.1
18	9.1 <sub>F</sub>	8.7	7.6	7.3 <sub>F</sub>	7.3	5.2	8.9	10.8	11.8	11.1	10.3	10.5
19	8.9	9.0	7.4	6.2	4.0	3.4	7.7	9.3	9.5	9.5	9.7	10.4
20	8.0	7.3	6.0	4.7	3.7	3.5	7.5	9.8	10.8	10.0	9.5	9.5
21	8.3	7.1 <sub>s</sub>	6.0 <sub>s</sub>	5.2	4.3	3.6	8.3	10.8	11.0	9.8	9.3	9.3
22	10.3	9.8	10.7	8.6	R	4.0	8.0	10.4	11.8	11.8	12.7	12.3
23	9.6	9.0	5.7	3.5	E	E	7.0	9.0	10.0	10.0	10.7	10.8
24	8.6	8.5	7.2 <sub>s</sub>	5.0	R	3.0 <sub>R</sub>	7.2 <sub>s</sub>	9.7	11.3	9.9	9.3	9.6
25	7.4 <sub>s</sub>	7.2 <sub>s</sub>	6.5	5.3	3.0 <sub>R</sub>	3.6 <sub>H</sub>	7.8	9.9	11.0	12.2	13.9	14.3
26	9.0	8.0	5.7 <sub>R</sub>	4.2	3.9	5.0	8.0	9.3 <sub>C</sub>	C	9.5	10.2	10.9
27	7.8	7.4	6.6	6.1	5.4	3.9	8.1	10.4	11.4	10.8	10.5	10.6
28	8.4	8.6	7.5	6.7	5.7	4.1	7.4	8.6	9.3	9.2	9.8	10.6
29	7.2	8.0	7.5	6.2	4.3	E	7.7	9.8	9.4	9.0	8.8	9.2
30	8.7	8.7	8.0	6.9	4.9	3.3 <sub>R</sub>	7.7	10.5	11.3	11.3	11.5	11.4
Count	27	29	28	29	24	29	29	28	28	28	29	29
Median	9.1	8.7	7.2	5.7	4.0	4.0	8.3	10.7	11.4	11.3	11.3	11.4
Mean	9.1	8.7	7.1	5.7	4.4	4.1	8.2	10.5	11.5	11.3	11.2	11.3

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F<sub>2</sub>

Unit : Mc

Month : November 1960

TABLE 45—*Concl'd.*

Ionospheric Data

75°E Mean Time

Latitude 10°2' N.

Longitude 77°5' E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
11.6	12.3	12.2	12.1	11.3	10.3	9.5	9.0	9.5	9.6	9.8	F	1
12.4	13.2	13.6	14.0	14.2	13.3 <sub>H</sub>	11.9	F	12.6 <sub>H</sub>	12.4	10.7	9.9	2
12.0	13.0	13.2	13.6	13.3 <sub>R</sub>	12.8 <sub>R</sub>	13.0	13.3 <sub>R</sub>	14.4	13.6	12.7	11.4	3
11.4	11.6	11.9	12.2	12.9	13.0	12.1 <sub>R</sub>	12.5	12.9 <sub>R</sub>	12.9 <sub>F</sub>	13.7	13.8	4
11.8	12.1	12.6	13.0	12.7	12.0	10.8	F	12.5	F	F	11.6	5
10.9	11.1	11.6	11.6	11.6	10.4	8.8	9.4	10.1	10.3	10.6	11.1	6
11.7	12.0	12.3	11.7	11.4	10.8	10.0	10.3	11.0	11.6	11.3	10.9	7
11.1	11.3	11.8	11.5	11.4	11.0	9.0	F	F	F	F	10.4 <sub>F</sub>	8
13.2	13.2	13.4	13.7	13.2	12.0	9.9 <sub>F</sub>	F	F	F	F	F	9
12.4	12.8	12.7	12.0	12.2	11.7	10.9	10.8 <sub>F</sub>	11.3	10.8	10.6	11.0	10
12.1	12.3	12.5	11.9 <sub>S</sub>	11.5	11.6 <sub>S</sub>	11.8 <sub>S</sub>	12.1	12.5	11.8 <sub>S</sub>	12.2 <sub>S</sub>	12.6	11
12.5	12.4	12.4	12.0	11.8	11.5	10.2	12.4 <sub>F</sub>	F	F	10.6	11.2	12
C	C	11.4	11.4	11.4 <sub>H</sub>	12.8	13.2	5.9	4.8	5.3	3.6	3.2	13
C	14.2	14.0	14.1	13.6	11.4	9.8	9.5	9.0 <sub>F</sub>	9.0	9.1 <sub>F</sub>	9.7	14
11.9	11.8	11.9	12.0	11.7	11.7	10.8	9.1	F	F	F	F	15
11.8	11.8	13.2	13.7	11.7 <sub>R</sub>	12.8 <sub>R</sub>	12.7	11.6	11.7	11.0	9.7	8.6	16
11.0	11.0	11.4	11.7	11.7	11.7	10.5	10.4	9.4	F	F	8.7	17
10.7	10.9	11.0	11.1	10.6	9.8	8.5	7.8	8.1	F	F	8.7 <sub>F</sub>	18
11.0	11.6	12.0	12.8	12.0 <sub>R</sub>	11.6	10.8 <sub>R</sub>	10.6	10.3	10.3	9.7	8.8	19
9.6	10.5	11.2	11.7	11.8	11.7	11.2	11.0	11.4	11.1	9.2	8.5	20
10.1	11.4	12.6	12.3	12.0 <sub>S</sub>	11.7 <sub>S</sub>	10.9	12.4	11.8 <sub>R</sub>	11.3	10.4	10.2	21
13.0	13.4	13.8	14.2	13.2 <sub>R</sub>	11.7 <sub>R</sub>	10.9	11.6	10.8	10.0	10.3 <sub>F</sub>	10.1	22
10.9	11.5	11.9	11.7	11.5	11.0 <sub>R</sub>	10.9	10.8	11.2	9.9	8.6	8.8	23
9.8	10.3	10.9	11.8	11.6 <sub>R</sub>	11.8	11.3	10.4	10.6	10.0	8.4	7.8	24
14.3	C	C	C	12.9 <sub>R</sub>	11.8	10.8	9.2	9.8	9.8	10.3	9.8	25
11.9	13.0	13.6	13.8	12.8	10.7 <sub>H</sub>	8.0	7.7	7.3	6.8	7.7	7.6	26
11.4	12.2	12.5	13.0	13.0	12.0	11.8	11.7	11.0	10.0	9.3	8.8	27
11.4	12.0	12.4	12.0	11.2	10.4	8.4	7.6 <sub>F</sub>	7.6	7.2	7.0	6.9	28
9.8	10.4	11.0	10.8	11.3	10.5	10.5	10.4	9.8	9.5	9.2	9.0	29
12.0	12.2	12.0	12.4	11.8	10.8	9.8	9.4 <sub>R</sub>	8.7	7.9	7.8	7.7 <sub>F</sub>	30
28	28	29	29	29	29	30	26	26	23	24	27	Count
11.6	12.0	12.3	12.0	11.8	11.7	10.8	10.4	10.7	10.0	9.8	9.7	Median
11.6	12.0	12.3	12.4	12.1	11.5	10.7	10.1	10.4	10.1	9.7	9.5	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F<sub>1</sub>

Unit : Mc

Month : November 1960

TABLE 46  
Ionospheric Data  
75°E Mean Time

Latitude 10°2' N.

Longitude 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5							L	C	C	C	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	B	B	B
12								L	L	L	L	C
13								L	L	L	L	C
14								L	L	L	L	C
15								L	B	L	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24							L	L	L	L	L	L
25							L	L	L	L	L	L
26								L	L	C	C	C
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
Count							..	..	..	..	..	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F<sub>1</sub>

Unit : Mc

Month : November 1960

TABLE 46  
Ionospheric Data  
75°E Mean Time

Latitude 10°2' N.

Longitude 77°5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	L	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
												5
L	L	L	L									6
L	L	L	L									7
L	L	L	L	L								8
				L								9
				L								10
L	L	L		L								11
C	C	C	L									12
L	C	L	L	L								13
L	L	L	L									14
												15
L	L	L	L	L								16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
				O								20
L	L	L	L	L								21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
			C	C								25
L	C	C	L	C								26
L	L	L	L	L								27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
												30
..	..	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F<sub>1</sub>

TABLE 46—Contd.

Latitude : 10° 2' N.

Unit : Mc

Ionospheric Data

Longitude : 77° 5' E.

Month : November 1960

75°E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	B
2								L	L	L	L	B
3								L	L	L	L	B
4								L	L	L	L	L
5								C	C	C	L	L
6							L	L	L	L	L	L
7							L	L	L	L	L	L
8							L	L	L	L	L	L
9							L	L	L	L	L	L
10							L	L	L	L	L	L
11								L	B	B	B	B
12							L	L	L	L	L	L
13							L	L	L	L	L	L
14							L	L	L	L	L	L
15							L	B	L	L	L	L
16							L	L	L	L	L	L
17							L	L	L	L	L	L
18							L	L	L	L	L	L
19							L	L	L	L	L	L
20							L	L	L	L	L	L
21							L	L	L	L	L	L
22							L	L	L	L	L	L
23							L	L	L	L	4.8	L
24							L	L	L	L	L	L
25							L	L	L	L	L	L
26							L	L	C	L	L	L
27							L	L	L	L	L	L
28							L	L	L	L	L	L
29							L	L	L	L	L	L
30							L	L	L	L	5.1	L
Mean							..	..	..	..	..	..
Median							..	..	..	..	..	..
Count							-	-	-	..	2	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F<sub>1</sub>

Unit : Mc

Month : November 1960

TABLE 46—Contd.

Ionospheric Data

75°E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
												5
L	L	L	L	L								6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
												10
L	L	L	L	L								11
L	L	L	L	L								12
C	C	L	L									13
L	L	L	L									14
												15
L	L	L	L	L								16
L	L	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
												20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
												25
A	L	L	L	L								26
L	L	L	L	L								27
L	L	L	L	L								28
L	L	L	L	L								29
												30
..	..	..	..	..	..							Mean
..	..	..	..	..	..							Median
..	..	..	..	..	..							Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo E

Unit : Mc

Month : November 1960

TABLE 47  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								A	A	A	A	A
2							1.9	A	A	A	A	A
3								2.7	C	C	C	A
4									A	A	A	A
5							C	C	C	C	C	C
6								2.6	A	A	A	A
7								2.7	A	A	A	A
8								A	A	A	A	A
9								3.0	A	A	A	A
10								A	A	A	A	A
11								2.7H	A	B	B	B
12									A	R	A	C
13									3.2	B	A	C
14									B	B	B	B
15								2.6	B	B	B	B
16									B	B	B	B
17									C	B	A	A
18									C	C	A	A
19								C	C	C	A	A
20									A	A	A	A
21									C	C	C	B
22									C	C	A	B
23									C	C	A	B
24								C	C	C	A	B
25									C	C	A	A
26								A	C	C	C	C
27									C	C	A	B
28									C	C	A	A
29								C	C	C	A	A
30									C	C	A	A
Mean							..	2.7	..	..	..	..
Median							..	2.7	..	..	..	..
Count							1	6	1	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo E  
Unit : Mc  
Month : November 1960

TABLE 47  
Ionospheric Data  
75°E Mean Time

Latitude : 10°3' N.  
Longitude : 77°5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A								1
A	A	3.6	A	A								2
A	A	A	A	A								3
A	A	A	A	A								4
												5
A	A	A	A	A								6
A	A	A	A	A								7
A	A	A	A	A								8
A	A	A	A	A								9
				B								10
B	B	B	A	R								11
A	A	A	B									12
C	C	C	B									13
B	B	B	B	A								14
												15
B	A	B	B									16
A	A	A	B									17
A	A	A	C	C								18
A	C	C	A	A								19
B	A	B	B	C								20
C	C	3.6	B									21
B	B	C	C									22
B	B	A	C									23
A	B	B	C									24
		A	C	C								25
A	C	C	B	C								26
B	B	A	C									27
A	B	A	C									28
B	B	A	C	C								29
A	A	A	C	A								30
..	..	..	..	..								Mean
..	..	..	..	..								Median
..	..	2	..	..								Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : fo E  
Unit : Mc  
Month : November 1960

TABLE 47—Contd.  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N.  
Longitude : 77°5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							2.4	A	A	A	A	A
2							2.4	A	A	A	A	A
3								3.0	A	C	A	A
4								A	A	A	A	A
5							C	C	C	C	C	A
6								A	A	A	B	A
7							2.3	3.0	A	A	A	A
8								A	A	A	A	A
9								A	A	A	A	A
10								A	A	A	A	A
11								A	B	B	B	B
12									A	3.5A	A	A
13								3.0	3.2	3.6	C	C
14								A	B	B	B	B
15								B	B	B	B	B
16									B	B	B	B
17									B	A	B	A
18								C	C	A	A	A
19								C	C	A	A	A
20								C	C	A	A	A
21									C	C	B	B
22									C	A	B	B
23									C	A	B	B
24									C	A	A	A
25									C	A	B	A
26							A	C	C	A	A	A
27								C	C	A	B	A
28								C	C	A	A	A
29								C	C	A	A	B
30								C	C	A	A	A
Mean							..	..	..	..	..	..
Median							..	..	..	..	..	..
Count							3	3	1	2	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo E  
Unit : Mc  
Month : November 1960

TABLE 47—Contd.  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N.  
Longitude : 77°5' E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
3	A	A	A	A								1
	A	3.5	A									2
	A	A	A									3
	A	A	A	A								4
	A	A	A	A								5
A	A	A	A	A								6
A	A	A	A	A								7
A	A	A	A	A								8
A	3.9	u3.5R	A	B								9
	A	B	B	B								10
B	B	B	A									11
A	A	B	B									12
C	C	B	B									13
C	B	B	B									14
B	B	B	B									15
B	B	B	B									16
A	A	C	C	C								17
A	A	A	A									18
A	A	B	B	A								19
												20
C	3.7	B	B									21
B	C	C										22
B	A	C	C									23
B	C	C	C									24
												25
A	A	B	B									26
B	B	A	C									27
A	A	C	C									28
B	B	C	C	C								29
A	A	C	C	A								30
..	..	..	..	..								Mean
..	..	..	..	..								Median
1	2	2	..	..								Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo Es

Unit : Mc

Month : November 1960

TABLE 48  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								8.4	10.6	11.0	12.2	12.4
2							G	7.4	10.6	10.8	12.0	12.0
3	4.6	3.2						G	C	C	C	11.6
4								..	8.0	10.4	11.4	11.0
5		C	C	C	C	C	C	C	C	C	C	C
6								G	8.8	11.0	11.2	11.2
7								G	8.0	9.2	12.0	12.2
8								6.4	7.4	10.7	10.4	11.0
9								7.0	7.8	8.8	10.0	10.0
10								8.7	8.2	10.0	10.0	9.6
11								G	6.8	B	B	10.0
12									8.0	8.0	9.0	C
13									G	G	10.0	C
14			2.7	2.0					G	B	B	9.2
15								G	B	B	B	B
16			2.7	2.8					G	G	G	7.
17									C	C	7.8	7.8
18									C	C	9.3	8.8
19								C	C	C	C	8.8
20									C	C	8.4	8.8
21									C	8.2	8.2	10.2
22									C	C	8.0	G.4
23									C	C	8.4	8.0
24								C	C	C	8.4	9.0
25									C	C	11.0	8.0
26								C	C	C	C	C
27									C	C	8.8	8.0
28									C	C	8.2	8.2
29								C	C	C	8.8	7.8
30									C	C	8.2	12.0
Mean	..	..	..	..	..	..	..	7.6	8.4	9.8	9.6	9.7
Median	..	..	..	..	..	..	..	6.4	8.0	9.2	9.0	9.2
Count	1	1	2	2	..	..	1	10	13	13	23	25

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

59I

Characteristic : fo Es

TABLE 48

Latitude : 10° 2' N.

Unit : Mc

Ionospheric Data

Longitude : 77° 5' E.

Month : November 1960

75°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
11.4	12.0	12.0	9.6	9.6					5.0			1
11.0	9.0	10.0	9.0	10.0					6.6	7.0	7.6	2
11.0	11.0	11.0	6.8									3
11.0	11.6	12.0	8.0	7.4								4
9.4	10.0	10.0	8.0	8.0								5
11.7	13.0	11.4	8.6	8.6								6
12.2	10.8	10.4	8.8	8.1						6.8	2.7	7
10.8	11.2	10.8	8.6	8.0						2.6	6.0	8
11.0	9.2	9.6	7.8	7.0								9
10.0	10.0	10.0	7.0	B								10
G	8.6	9.6	9.0	7.0				C				11
9.8	10.0	10.8	8.0	7.6								12
C	C	C	G									13
10.0	C	8.1	G	7.6				3.1	2.8			14
B	10.0	10.0	G									15
G	7.0	7.0	G									16
8.2	7.8	7.4	G									17
8.8	8.8	8.1	C	C								18
8.7	C	C	7.2	6.8								19
8.6	8.4	G	G	C								20
10.0	C	G	G									21
8.0	G	5.4	C						6.0			22
8.4	9.0	8.0	C									23
9.0	9.6	8.0	C									24
8.0	7.0	7.0	C	C	3.5							25
9.7	C	C	G									26
8.8	7.0	12.0	C									27
8.2	6.5	7.1	C									28
8.2	7.8	7.6	C	C	C							29
8.3	9.2	10.4	C	5.6							5.1	30
9.6	9.4	9.3	8.2	7.8	..	..	..	..	..	..	..	Mean
9.2	9.2	9.6	7.2	7.6	..	..	..	..	..	..	..	Median
28	25	27	21	13	1	..	..	1	4	3	4	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

59I

Characteristic : fo Es  
Unit : Mc  
Month : November 1960

TABLE 48—Contd.  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N.  
Longitude : 77°5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							G	10.4	10.8	12.2	12.0	12.0
2							G	10.0	10.0	12.0	12.0	11.0
3							..	G	10.8	C	12.0	11.0
4							..	7.0	10.0	11.0	11.4	11.0
5							C	C	C	C	10.7	8.7
6								8.4	10.8	11.0	10.4	11.0
7	2.6						G	G	8.2	12.2	12.0	12.0
8								7.6	9.6	10.8	10.7	11.6
9								8.2	8.2	9.6	10.6	10.4
10								8.0	9.6	10.0	10.4	10.0
11								6.8	B	B	9.4	11.0
12								..	7.0	10.0	8.8	3.2
13								G	6.6	G	C	C
14			2.0	3.0				6.6	B	B	6.8	10.2
15								B	B	B	B	B
16				2.1				..	G	8.0	7.8	7.8
17								..	G	7.8	8.2	7.6
18								C	C	9.0	9.4	9.1
19								C	C	C	8.8	8.8
20								C	C	8.6	8.8	8.4
21								C	C	8.2	9.4	10.2
22								C	C	6.0	8.0	G
23								C	C	8.6	8.0	8.0
24								C	C	9.0	9.0	8.4
25								C	C	9.6	G	8.2
26							6.8	C	C	8.0	8.4	9.0
27								..	C	8.3	8.4	8.1
28								C	C	8.2	8.2	7.8
29								C	C	8.2	8.4	8.0
30								C	C	8.6	9.4	8.8
Mean	..	..	..	..	..	..	..	8.1	9.2	9.3	9.5	9.5
Median	..	..	..	..	..	..	..	7.3	9.6	8.8	9.2	8.9
Count	1	1	2	..	..	..	4	12	13	24	28	28

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo Es

Unit : Mc

Month : November 1960

TABLE 48—Contd.

Ionospheric Data

75°E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
12.0	11.0	10.0	10.6	8.0				7.0	2.4			1
G	10.0	G	10.0						7.0	9.0	5.0	2
10.8	12.0	8.0	6.4									3
12.0	12.0	11.0	8.0	6.8								4
10.0	9.8	8.2	7.6	7.0								5
12.0	11.2	12.2	8.8	7.8								6
12.0	12.0	9.2	8.8	6.4						3.0	4.0	7
12.2	12.0	9.0	8.1							4.4	6.8	8
10.6	8.6	G	7.8									9
10.4	8.6	8.0	B	B								10
8.2	9.0	8.2	8.2									11
9.3	10.2	8.0	6.5									12
C	C	B	6.0									13
C	8.0	G	7.0									14
9.7	9.6	G	G	6.3				4.0				15
G	G	G	G									16
7.8	6.8	G										17
9.3	8.7	C	C	C								18
8.7	7.7	7.2	7.6									19
8.8	7.8	G	G	4.2						4.6		20
C	G	7.0	G									21
8.6	6.0	C										22
7.0	8.4	C										23
9.0	8.6	C	C		3.9		4.1					24
G	C	C	C									25
12.0	8.9	G	G									26
6.7	7.8	8.6	C									27
7.6	8.5	C	C									28
7.8	7.8	C	C	C					4.2			29
8.7	9.6	C	C	4.3							5.1	30
9.6	9.2	8.8	8.0	6.4	..	..	..	..	..	..	..	Mean
9.0	8.6	8.0	7.6	6.6	..	..	..	..	..	..	..	Median
27	28	21	19	8	1	..	1	2	3	4	4	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fb Es  
Unit : Mc  
Month : November 1960

TABLE 49  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N.  
Longitude : 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1							G	2.7	3.2	3.5	3.8	3.9
2							G	2.7	3.2	3.6	3.8	4.0
3	1.9	1.8						G	C	C	C	4.0
4								..	3.4	3.8	3.9	4.0
5		C	C	C	C	C	C	C	C	C	C	4.3
6								G	3.4	3.6	4.1	4.2
7								G	3.4	3.8	3.9	4.1
8								2.8	3.4	3.7	4.0	4.0
9								3.0	3.5	3.8	4.3	4.3
10								3.0	3.3	4.0	4.1	4.4
11								G	3.6	..	..	..
12								..	3.5	3.8	3.8	C
13								..	G	..	..	C
14			1.7	1.6				..	G	..	..	..
15								G	..	..	..	..
16			2.2	1.9				..	G	G	G	..
17								..	C	C	4.0	4.2
18								..	C	C	4.1	4.4
19								..	C	C	4.3	4.5
20								..	3.3	4.0	4.1	4.2
21								..	C	..	..	..
22								..	C	C	3.9	G
23								..	C	C	4.0	4.0
24								..	C	C	3.8	..
25								..	C	C	4.3	4.2
26								2.9	C	C	C	C
27								..	C	C	3.7	3.8
28								..	C	C	4.0	4.1
29								C	C	C	3.8	4.1
30								..	C	C	4.1	4.1
Mean	..	..	..	..	..	..	..	2.8	3.4	3.8	4.0	4.1
Median	..	..	..	..	..	..	..	2.7	3.4	3.7	4.0	4.1
Count	1	1	2	2	..	..	1	11	14	13	23	21

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fb Es

Unit : Mc

Month : November 1960

TABLE 49  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
3.8	3.7	3.4	3.2	2.8								1
4.0	3.8	3.5	3.6	3.1								2
4.0	3.8	3.6	3.4	..					2.2	2.0	2.8	3
4.2	3.8	3.5	3.2	2.8								4
4.1	4.0	4.0	3.4	3.0								5
4.2	4.0	3.7	3.4	2.9								6
4.0	4.2	3.7	3.6	3.0						1.8		7
4.2	4.0	3.8	3.5	3.0								8
4.2	4.2	3.8	3.5	3.0								9
4.2	4.1	3.9	-	-								10
..	..	..	..	..				G				11
4.1	4.0	4.0	..	..								12
G	G	G	G	3.2								13
4.4	G	3.9	G					2.9	2.4			14
..	..	..	G									15
G	4.0	..	G									16
4.3	4.2	3.8	G									17
4.2	4.1	3.7	G									18
4.5	G	G	4.8	3.8								19
..	4.2	G	G	G								20
4.3	G	G	G									21
..	G	5.0	G									22
..	..	3.8	G									23
4.1	..	3.7	G		3.0							24
4.2	..	..	G									25
4.7	G	G	G									26
4.0	..	5.0	G									27
3.9	..	3.8	G									28
..	..	3.8	G		G							29
3.9	3.9	3.7	G	3.2							2.9	30
4.2	4.0	3.9	3.6	3.1	..	..	..	..	..	..	..	Mean
4.2	4.0	3.8	3.2	3.0	..	..	..	..	..	..	..	Median
23	17	23	18	11	1	..	..	1	2	2	2	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : fb Es  
Unit : Mc.  
Month : November 1960

TABLE 49—*contd.*  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N  
Longitude : 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							G	3.0	3.4	3.7	3.9	3.9
2							G	3.0	3.4	3.7	3.8	3.8
3								G	3.3	C	3.8	4.0
4								3.2	3.7	4.0	4.0	4.0
5								C	C	C	4.0	4.3
6								3.2	3.6	4.1	4.4	4.2
7	1.7						G	G	3.6	3.8	4.0	4.0
8								3.2	3.6	3.8	4.0	4.1
9								3.2	3.6	4.2	4.3	4.3
10								3.1	3.6	3.9	4.0	4.1
11								3.3				
12									3.6	3.8	4.1	4.1
13								G		G	C	C
14			1.6	1.4				3.1				4.6
15												
16				2.0								
17									G	3.9		4.3
18									C	4.0	4.1	4.4
19									C	C	4.6	4.5
20									C	3.9	4.0	4.2
21												
22									C	4.0	4.0	G
23									C	4.0	4.0	
24									C	3.9	4.1	4.2
25									C	4.0	G	4.3
26							2.8	C	C	3.9	4.0	4.1
27									C	3.6	4.0	4.0
28									C	3.7	4.0	4.1
29									C	3.6	4.0	
30									C	3.9	4.0	4.0
Mean								3.1	3.6	3.9	4.0	4.2
Median								3.1	3.6	3.9	4.0	4.1
Count	1	1	2				4	12	13	22	23	23

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fb Es  
Unit : Mc  
Month : November 1960

TABLE 49—*contd.*  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N  
Longitude : 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
3.8	3.6	3.4	3.0	2.5				2.4	1.6			1
G	3.7	G	3.3	..					2.0	2.6	2.1	2
3.9	3.8	3.6	3.3	..								3
4.1	3.8	3.4	3.1	2.5								4
4.0	4.0	3.6	3.3	2.6								5
4.1	3.8	3.7	3.2	2.7								6
4.0	4.0	3.7	3.3	2.6						2.5	1.9	7
4.1	3.9	3.7	3.2	..						2.6	2.8	8
4.1	4.0	G	3.3	..								9
4.2	4.1	..	..	..								10
4.0	4.0	..	..	..								11
C	C	..	..	..								12
C	..	G	..	..				2.8				13
..	..	G	G	..								14
..	..	..	..	..								15
G	G	G	G	..								16
4.3	4.1	G	..	..								17
4.3	3.9	C	C	C								18
4.3	4.1	4.7	4.3	..								19
4.3	4.0	G	G	3.2						3.0		20
C	G	..	G	..								21
..	5.0	C	..	..								22
..	4.0	C	..	..								23
..	3.8	C	C	..	3.8		3.4					24
G	C	C	C	..								25
6.0	4.1	G	G	..								26
..	4.0	4.3	C	..								27
3.8	4.0	C	..	..								28
..	..	C	C	C					2.9			29
4.0	3.9	C	C	3.6							2.5	30
4.2	4.0	3.8	3.3	2.8	..	..	..	..	..	..	..	Mean
4.0	4.0	3.4	3.2	2.6	..	..	..	..	..	..	..	Median
20	24	17	15	7	1	..	1	2	3	4	4	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : November 1960

TABLE 50  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	1.1	1.3	1.2	1.1	1.4	1.2	1.8	1.6	2.0	2.4	2.5	2.7
2	1.5	1.5	1.3	1.6	1.2	1.5	2.0	1.7	2.1	2.4	2.4	2.5
3	1.9	1.7	1.5	1.4	1.5	1.5	2.0	1.7	C	C	C	2.8
4	2.1	2.5	2.5	2.5	1.6	1.5	2.4	3.0	2.9	2.9	2.9	3.1
5	1.8	C	C	C	C	C	C	C	C	C	C	3.8
6	2.2	1.8	2.4	2.4	2.3	2.1	2.7	2.4	2.7	2.6	3.2	3.1
7	2.0	1.8	1.4	1.7	2.0	1.5	2.2	2.3	2.6	3.0	2.9	2.9
8	2.0	1.8	1.7	1.5	1.5	1.7	2.2	1.8	2.2	2.3	2.6	2.7
9	1.6	1.9	1.7	1.7	1.4	1.5	2.2	2.1	2.6	3.1	3.2	3.6
10	1.9	1.8	1.5	1.8	1.7	1.7	2.2	2.1	2.6	3.2	3.0	3.0
11	2.0	1.8	1.5	1.8	1.6	1.8	2.1	2.2	2.7	9.2	5.4	5.0
12	1.7	1.8	1.9	1.6	1.7	1.7	2.7	2.8	2.8	3.2	3.0	C
13	2.2	1.7	1.6	1.8	1.6	E	3.0	2.8	2.8	3.8	3.0	C
14	1.6	1.2	1.1	1.0	1.7	E	2.3	2.8	3.8	7.6	5.2	4.4
15	2.4	2.0	1.7	1.7	1.8	1.9	2.8	2.2	8.6	6.4	5.4	5.0
16	1.6	1.7	1.5	1.6	1.8	1.6	2.8	2.7	3.8	4.4	4.4	4.4
17	2.2	2.0	2.6	2.4	1.9	E	3.3	3.0	3.6	4.2	3.3	3.7
18	2.5	2.6	2.7	2.3	2.6	2.2	3.2	3.2	C	C	3.2	C
19	2.3	2.3	2.4	2.4	2.5	E	2.9	2.8	C	C	C	C
20	2.3	1.8	2.4	2.1	2.2	2.1	2.3	3.0	2.9	3.2	3.3	3.5
21	2.4	1.8	2.2	2.0	2.2	2.2	2.6	3.3	C	C	C	4.2
22	2.6	2.2	2.6	2.4	2.6	2.6	2.8	2.8	C	C	3.2	4.2
23	2.4	2.4	2.4	2.6	1.9	E	2.6	2.2	2.8	C	3.1	4.0
24	1.8	1.9	2.2	1.7	1.9	E	2.6	C	C	C	3.0	4.2
25	2.4	2.2	2.2	2.1	2.0	2.6	2.6	2.8	C	C	2.6	2.8
26	2.5	2.5	2.5	2.3	2.2	2.5	2.6	2.5	3.2	C	C	C
27	2.3	2.4	2.4	2.2	2.5	2.1	2.6	2.8	3.3	3.6	2.9	3.8
28	2.4	2.0	2.3	2.4	2.7	2.8	2.8	2.9	C	C	3.1	3.2
29	2.7	2.8	2.6	2.2	2.0	2.2	2.7	C	C	C	3.0	3.3
30	2.1	2.4	2.5	2.0	2.5	2.0	2.6	2.9	C	C	2.8	3.0
Mean	2.1	2.0	2.0	1.9	1.9	1.9	2.5	2.5	3.2	4.0	3.3	3.6
Median	2.2	1.9	2.2	2.0	1.9	1.7	2.6	2.8	2.8	3.2	3.0	3.5
Count	30	29	29	29	29	29	29	27	19	17	25	25

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : November 1960

TABLE 50  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
2.6	2.6	2.4	2.3	2.1	2.0	1.4	1.3	1.2	1.3	1.2	1.3	1
2.6	2.8	2.7	2.4	2.0	2.2	1.2	1.3	1.5	1.6	1.7	1.5	2
2.9	2.9	2.7	2.8	2.4	3.2	2.1	2.0	1.6	2.3	2.4	1.8	3
3.0	2.8	2.5	2.3	2.0	2.1	2.0	1.9	1.7	1.7	1.7	1.7	4
3.6	3.3	3.0	2.6	2.4	2.0	1.3	2.0	1.9	1.8	3.1	2.8	5
3.0	3.1	2.6	2.6	2.5	2.4	1.8	2.4	2.0	1.7	1.7	1.8	6
3.0	3.4	2.7	2.6	2.0	2.3	1.3	1.5	1.9	1.3	1.7	1.7	7
2.8	3.1	2.8	2.6	2.6	2.3	1.6	2.0	2.0	2.2	1.7	2.1	8
3.4	3.2	2.9	2.9	2.8	2.5	1.6	2.1	2.1	2.1	2.0	2.0	9
3.3	3.6	2.8	3.6	4.7	2.8	1.8	1.8	1.7	1.6	2.4	2.2	10
4.6	4.5	4.0	3.7	2.6	2.6	2.4	1.8	C	2.4	1.8	1.9	11
2.9	3.2	3.2	3.6	3.0	2.6	1.7	1.8	1.9	2.4	2.3	2.5	12
C	C	C	3.6	3.0	2.8	2.4	2.2	2.3	1.7	1.6	1.5	13
3.8	C	3.8	3.6	2.8	2.7	1.9	2.4	1.9	2.3	2.2	2.2	14
4.9	4.6	4.0	3.6	3.1	2.9	2.2	2.2	2.2	2.3	2.2	2.3	15
4.4	3.3	4.3	4.2	3.6	3.1	3.1	2.8	3.0	2.4	2.4	2.4	16
3.8	3.4	3.3	3.8	3.5	2.9	3.0	2.3	2.2	2.4	2.7	2.3	17
C	C	3.3	C	C	3.2	2.8	2.8	2.7	3.0	3.2	2.7	18
C	C	C	3.1	2.7	3.3	3.1	2.6	2.8	2.8	3.1	2.3	19
4.3	3.5	4.3	3.8	C	3.1	2.8	2.4	2.2	2.2	2.2	2.2	20
C	C	3.0	3.4	3.0	2.3	1.8	1.8	1.8	2.4	2.2	2.5	21
4.2	4.3	C	C	3.0	2.6	2.0	2.4	2.0	2.8	2.0	2.0	22
4.0	3.8	3.0	C	3.0	2.8	2.2	2.2	2.0	2.0	2.4	2.4	23
3.4	4.0	3.0	C	3.0	2.7	2.6	2.8	2.8	2.8	3.2	2.6	24
2.7	4.0	3.8	C	C	2.7	2.9	2.5	2.8	2.8	2.7	2.7	25
3.0	C	C	3.6	C	3.1	3.1	2.7	2.3	2.1	2.1	2.3	26
4.1	3.9	2.7	3.5	3.0	2.6	2.4	2.7	2.8	2.6	2.8	2.0	27
3.1	4.1	2.8	C	3.2	2.7	2.0	2.2	2.2	2.2	2.8	2.7	28
4.2	3.8	2.5	C	C	C	2.6	3.1	2.4	2.3	2.3	2.1	29
3.1	2.6	2.9	C	3.1	3.1	2.9	C	2.6	2.5	2.2	2.0	30
3.5	3.5	3.1	3.2	2.8	2.7	2.2	2.2	2.2	2.2	2.3	2.2	Mean
3.4	3.4	3.0	3.4	3.0	2.7	2.2	2.2	2.1	2.3	2.2	2.2	Median
26	24	26	22	25	29	30	29	29	30	30	30	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

600

Characteristic : fmin

Unit : Mc.

Month : November 1960

TABLE 50—*contd.*

Ionospheric Data

75°E Mean Time

Latitude : 10° 2' N

Longitude : 77° 5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	1.2	1.5	1.4	1.2	C	1.3	1.8	1.8	2.1	2.4	2.6	2.7
2	1.4	1.4	1.5	1.5	1.3	1.5	1.6	1.8	2.2	2.3	2.5	2.6
3	1.8	1.5	1.3	1.5	1.4	1.6	2.4	2.0	2.1	C	C	2.9
4	2.5	2.3	2.6	2.6	1.5	1.7	2.6	2.5	2.8	2.8	3.0	2.9
5	1.8	C	C	C	C	C	C	C	C	C	3.2	3.4
6	2.2	2.7	2.5	1.9	2.3	2.2	2.5	2.3	2.6	2.8	4.4	3.1
7	1.5	1.6	1.7	1.5	1.6	1.8	1.8	2.9	2.8	2.7	3.0	3.0
8	2.1	1.7	1.5	1.7	1.8	1.7	2.4	2.2	2.4	2.5	2.7	2.9
9	1.5	1.7	1.6	1.6	1.7	1.5	2.6	2.4	3.0	3.2	3.4	3.3
10	2.1	1.8	1.7	1.8	1.8	1.7	2.8	2.5	3.2	2.8	2.8	3.0
11	1.8	1.8	1.5	1.8	1.9	1.9	2.6	2.5	9.0	5.8	5.3	4.7
12	1.9	1.5	2.2	1.8	1.7	1.8	2.8	3.0	3.0	2.7	2.9	2.9
13	2.0	2.0	2.2	1.5	2.3	1.6	2.9	2.9	2.9	3.0	C	C
14	1.5	1.5	1.1	1.5	1.6	1.8	3.0	2.7	8.0	6.0	4.8	3.8
15	2.2	2.2	1.8	1.9	1.7	1.9	3.0	B	7.0	6.0	5.0	4.9
16	1.7	1.6	1.7	2.2	1.9	2.8	2.8	3.3	4.2	4.0	4.0	4.4
17	2.2	2.7	1.8	3.0	2.5	E	3.4	3.2	4.0	3.2	4.1	3.6
18	2.9	2.3	2.9	2.7	2.8	2.5	3.3	C	C	3.3	3.3	C
19	2.8	2.4	2.6	2.6	2.7	2.3	3.1	C	C	C	C	C
20	2.1	1.9	2.0	2.2	2.3	2.3	2.8	C	2.9	3.1	3.5	3.5
21	2.0	2.4	2.2	1.7	2.1	2.0	3.2	C	C	C	4.2	4.4
22	2.6	2.2	2.2	2.1	2.6	2.6	2.8	C	C	3.2	4.0	4.4
23	2.4	2.2	2.1	2.6	E	E	2.5	2.8	C	3.0	4.0	4.2
24	1.9	2.2	1.8	2.0	1.9	2.0	2.8	C	C	3.0	3.2	3.3
25	2.2	2.4	2.2	2.0	1.8	1.8	2.8	C	C	2.5	4.2	2.8
26	2.7	2.1	2.7	2.4	2.3	2.4	2.2	C	C	2.8	3.1	3.2
27	2.3	2.5	2.4	2.3	2.3	2.4	2.8	3.1	3.5	2.8	4.0	3.6
28	2.6	1.9	2.6	2.5	2.5	2.1	2.8	C	C	2.7	3.2	3.2
29	2.6	2.4	2.6	2.4	2.5	E	2.7	C	C	2.8	3.5	4.0
30	2.3	1.7	2.0	1.9	2.1	2.3	2.5	C	C	3.0	3.1	3.1
Mean	2.1	2.0	2.0	2.0	2.0	1.9	2.7	2.6	3.8	3.2	3.6	3.5
Median	2.1	2.0	2.0	1.9	1.9	1.8	2.8	2.5	3.0	2.9	3.4	3.3
Count	30	29	29	29	28	29	29	17	18	26	27	27

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

600

Characteristic : fmin

Unit : Mc

Month : November 1960

TABLE 50—*contd.*

Ionospheric Data

75°E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.7	2.6	2.4	2.1	2.1	1.6	1.3	1.2	1.1	1.1	1.4	1.5	1
2.9	2.7	3.0	2.7	2.6	1.6	1.4	1.4	1.3	1.5	1.5	2.1	2
3.0	2.7	3.0	2.7	3.3	3.0	1.7	1.8	2.2	2.2	2.2	2.0	3
3.0	2.7	2.4	2.3	2.0	2.2	1.8	1.6	1.8	1.8	1.7	1.7	4
3.0	3.2	2.7	2.4	2.1	1.7	1.3	2.1	1.8	2.2	3.0	2.6	5
2.8	2.6	2.6	2.3	2.2	2.4	2.1	2.1	1.5	1.6	1.9	1.8	6
3.0	3.0	2.9	2.6	2.0	2.1	1.7	1.6	1.7	1.6	1.6	1.5	7
2.8	3.2	3.0	2.5	2.7	2.0	1.7	1.9	2.0	2.2	1.2	1.9	8
3.5	3.2	3.2	2.6	3.0	2.0	1.7	2.1	2.2	2.1	1.8	2.1	9
3.2	3.4	3.8	6.2	4.6	2.6	1.8	1.8	1.8	1.6	2.0	1.7	10
4.4	4.2	4.0	3.4	2.8	2.6	2.2	2.4	2.6	2.2	1.7	C	11
3.1	3.0	4.0	3.4	2.8	2.2	1.6	2.2	2.3	2.5	2.0	2.6	12
C	C	4.2	3.4	2.9	2.4	2.5	2.0	1.8	1.7	1.8	1.5	13
C	4.2	4.0	3.4	3.2	2.6	2.2	2.2	1.8	2.3	2.2	2.5	14
4.6	4.0	4.0	3.4	2.8	2.4	2.2	2.4	2.3	2.4	2.4	2.1	15
4.2	4.2	4.6	3.9	3.8	3.2	2.7	2.9	3.2	2.8	2.5	2.4	16
3.8	3.4	4.0	3.5	3.5	2.9	2.7	2.6	2.4	2.4	2.4	2.3	17
C	3.3	C	C	C	3.0	2.6	2.9	3.0	3.1	2.9	2.8	18
C	C	3.1	2.8	3.5	3.0	2.8	2.5	2.6	2.8	2.2	2.3	19
3.6	3.3	4.5	4.2	2.2	2.9	2.4	2.5	2.4	2.2	2.4	2.0	20
C	3.0	3.7	3.4	2.6	1.9	2.5	2.2	2.4	2.4	2.4	2.6	21
4.2	C	C	3.2	2.8	2.2	2.2	2.2	2.4	2.6	2.2	1.5	22
4.2	3.2	C	3.3	3.0	2.4	2.0	2.4	1.9	2.2	2.6	2.6	23
4.0	3.2	C	C	3.4	2.8	3.0	2.3	2.5	2.8	3.2	2.5	24
4.0	C	C	C	2.8	2.6	3.1	2.9	2.5	2.5	2.6	2.4	25
2.8	2.7	4.0	3.5	2.9	2.5	2.5	2.5	2.8	2.8	2.4	2.2	26
4.0	3.6	2.6	3.5	2.9	2.6	2.2	2.4	2.6	2.4	3.0	2.6	27
3.1	3.3	C	3.2	3.2	2.4	2.8	2.3	2.2	2.6	2.6	2.4	28
4.0	3.8	C	C	C	2.8	2.5	2.7	3.0	2.2	2.2	2.4	29
2.8	2.9	C	C	3.0	3.1	2.3	2.4	2.5	2.5	2.6	2.1	30
3.5	3.2	3.4	3.2	2.9	2.4	2.2	2.2	2.2	2.2	2.2	2.2	Mean
3.2	3.2	3.4	3.3	2.8	2.4	2.2	2.2	2.3	2.2	2.2	2.2	Median
25	26	22	25	28	30	30	30	30	30	30	29	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h<sup>r</sup> F<sub>2</sub>

Unit : Km

Month : November 1960

TABLE 51  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	L	L
2								L	L	L	L	L
3								L	C	C	C	L
4								L	C	C	C	L
5								C	C	C	C	C
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11								L	L	B	B	B
12								L	L	L	L	C
13								L	L	L	L	C
14								L	L	B	L	L
15								L	B	L	L	L
16									L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25							L	L	L	L	L	L
26								L	L	C	C	C
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
Count							..	..	..	..	..	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

603

Characteristic : h' F<sub>2</sub>

Unit : Km

Month : November 1960

TABLE 51

Ionospheric Data

75°E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	L	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
C	L	L	L	L	L							4
												5
L	L	L	L									6
L	L	L	L									7
L	L	L	L									8
L	L	L	L	L								9
												10
L	L	L		L								11
L	L	L	L	L								12
C	C	C		L								13
L	L	L	L	L								14
L	L	L										15
L	L	L	L	L								16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	C	C	L	O								26
L	290	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
..	..	..	..	..	..							Mean
..	..	..	..	..	..							Median
..	1	..	..	..	..							Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

603



Characteristic : h' F<sub>2</sub>

Unit : Km

Month : November 1960

TABLE 51—*contd.*

Ionospheric Data

75°E Mean Time

Latitude: 10°2' N

Longitude: 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5								C	C	C	C	C
6							L	L	L	L	L	L
7							L	L	L	L	L	L
8							L	L	L	L	L	L
9								L	L	L	L	L
10							L	L	L	L	L	L
11								L	B	B	B	B
12								L	L	L	L	L
13							L	L	L	L	L	L
14								L	B	L	L	L
15								B	L	L	L	L
16								L	L	L	L	L
17							L	L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22							L	L	L	L	L	L
23							L	L	L	L	260	L
24							L	L	L	L	L	L
25							L	L	L	L	L	L
26								L	C	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	260	L
Mean							..	..	..	..	..	..
Median							..	..	..	..	..	..
Count							..	..	..	..	2	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h' F<sub>2</sub>

Unit : Km

Month : November 1960

TABLE 51—*contd.*

Ionospheric Data

75°E Mean Time

Latitude: 10°2' N

Longitude: 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L								5
L	L	L	L	L								6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L								11
L	L	L	L	L								12
C	C	L	L	L								13
C	L	L	L	L								14
L	L	L	L	L								15
L	L	L	L	L								16
L	L	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L								26
L	L	L	L	L								27
L	L	L	L	L								28
L	L	L	L	L								29
L	L	L	L	L								30
..	..	..	..	..								Mean
..	..	..	..	..								Median
..	..	..	..	..								Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic: h' F

Unit : Km.

Month: November 1960

TABLE 52  
Ionospheric Data  
75°E Mean Time

Latitude: 10.2° N

Longitude: 77° 5° E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	230	235	250	260	250	235	270	240	235	220	200	215
2	220	210	220	220	225	240	260	240	220	215	200	220
3	240	240	220	220	230	225	260	240	C	C	C	200
4	220	220	220	220	230	240	260	240	230	220	205	200
5	250	C	C	C	C	C	C	C	C	C	C	C
6	240	235	225	225	225	240	260	240	230	220	210	200
7	235	225	220	230	230	230	260	240	230	215	210	200
8	240	235	220	220	220	235	260	240	225	210	200	210
9	235	230	215	215	225	250	270	245	230	220	220	220
10	u250F	230F	u225F	225	220	245	270	245	230	225	215	215
11	240	230	225	220	220	225	265	235	225	B	B	B
12	250	230	235	220	230	235	270	245	230	220	215	C
13	205	260	305	300	390	E	300	250	240	230	225	C
14	260	260	345	L	335	E	255	240	230	B	u250B	205H
15	220	215	210	225	270	225	265	235	B	B	B	B
16	245	255	275	280	215	250	250	260	240	u245B	u220B	u220B
17	230	225	235	240	230	E	260	225	220	220	205	210
18	260	260	245	260	240	250	255	225	225	225	215	220
19	235	235	225	225	215	E	270	230	225	235	225	220
20	220	210	220	220	235	230	260	230	220	220	200	200
21	230	225	225	240	230	230	260	240	230	220	220	220
22	280	280	240	220	210	240	270	225	220	220	220	220
23	220	220	210	225	220	E	265	235	220	210	205	200
24	240	225	220	210	210	E	240	230	220	220	200	200
25	220	220	250	215	225	L	240	230	220	225	225	200
26	250	250	220	240	260	280	255	230	220	C	C	C
27	230	215	225	230	225	220	235	220	210	195H	180	185
28	235	240	230	230	225	220	250	230	215	205	200H	200
29	245	235	220	210	200	240	240	225	200	200	190	195
30	235	235	225	220	205	220	250	215	210	200	200	200
Mean	235	235	235	230	235	235	260	235	225	220	210	205
Median	235	230	225	225	225	240	260	235	225	220	210	200
Count	30	29	29	28	29	28	29	29	27	24	25	24

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h' F

Unit : Km

Month : November 1960

TABLE 52  
Ionospheric Data  
75° E Mean Time

Latitude: 10° 2' N

Longitude: 77° 5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
215	210	200	220	240	260	310	F	320	300	270	240	1
200	200	210	220	240	270	340	F	280	240	240	245	2
200	210	200	205	240	255	315	315	245	225	235	225	3
215	215	215	215	240	260	330	350	300	295	250	240	4
C	200	215	225	240	260	335	F	280	240	260	250	5
200H	205H	200H	225	245	270	345	360	300	255	235	240	6
210	215	215	230	245	275	335	370	U315F	260	250	240	7
200	220	215	220	240	265	340	U440F	F	F	U305F	255	8
215H	210	210	220	240	270	340	F	F	U380F	U370F	U260F	9
210	220	210	220	B	275	340	U395F	350F	310F	300	270	10
220	225	220	230	250	270	290	285	C	250	250	250	11
200	200	220	220	245	265	340	415	F	F	290	225	12
C	C	C	245	260	245	230	235	310	305	260	280	13
200H	C	220H	235	240	260	300	330	345	305	265	240	14
U250B	230	220	225	245	265	300	380	420	385	325	280	15
220	215	U230B	235	235	260	310	320	295	255	230	230	16
200H	200	200	220	235	245	305	340	315	315	310	270	17
200	200	215	240	225	260	340	F	F	F	285	255	18
220	220	210	U260A	240	255	300	320	310	280	250	225	19
200	210	230	220	C	260	315	335	280	240	220	235	20
215	200	210	220	240	260	300	260	210	220	235	250	21
220	225	A	220	220	250	260	280	280	275	240	230	22
200	210	210	200	230	250	290	310	270	220	215	240	23
200	200	205	220	220	240	280	280	240	220	220	230	24
210	210	210	C	C	270	280	310	280	240	255	240	25
U250A	C	C	210	C	260	320	350	320	285	245	240	26
200	205	A	200	225	240	270	275	260	250	240	235	27
195	200H	200	205	220	250	260	320	285	270	260	260	28
200	190	200	200	220	240	280	280	260	260	250	240	29
190	195	185	215	220	245	300	345	315	290	250	260	30
210	210	210	220	235	260	305	330	295	275	260	245	Mean
200	210	210	220	240	260	310	320	295	260	250	240	Median
28	27	26	29	26	30	30	25	25	27	30	30	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F  
Unit : Km.  
Month : November 1960

TABLE 52—*contd.*  
Ionospheric Data  
75° E Mean Time

Latitude: 10°2' N  
Longitude: 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	225	245	255	260	C	250	255	235	220	205	205 <sub>H</sub>	210
2	220	215	220	230	235	260	245	235	220	205	200	200
3	235	220	220	220	240	240	255	220	215	C	200	205
4	220	220	225	240	235	260	250	235	220	215	200	200
5	235	C	C	C	C	C	C	C	C	C	C	C
6	240	235	230	220	230	270	245	230	225	210	220	200
7	230	220	225	235	220	240	245	235	220	215	210	205
8	240	230	220	220	225	255	250	230	220	205	200	200
9	220	220	215	220	245	275	255	240	220	225	220	215 <sub>H</sub>
10	U250 <sub>F</sub>	U230 <sub>F</sub>	U220 <sub>F</sub>	220	230	270	250	240	230	220	215 <sub>H</sub>	205
11	240	225	220	230	215	245	250	235	B	B	B	B
12	250	220	230	220	230	260	250	240	225	215	215	210
13	240	300	280	320	F	370	245	240	235	225	C	C
14	265	300	385	370	315	300	240	230	B	B	240	230
15	220	220	220	250	265	230	250	B	B	B	B	U250 <sub>B</sub>
16	240	270	285	230	225	200	250	250	U240 <sub>B</sub>	220	205 <sub>H</sub>	U215 <sub>B</sub>
17	230	230	225	260	220	E	240	220	220	205	205	205
18	260	250	255	265	220	220	240	225	225	200	200	215
19	240	225	225	220	230	280	240	230	220	230	240	225
20	220	220	220	235	240	265	240	230	215	215	200	200
21	220	230	230	240	220	240	250	240	250	220	220	215
22	280	260	240	200	220	240	240	220	220	220	200	220
23	220	220	210	240	E	E	240	220	200	210	200	200
24	230	220	210	220	210	320	240	225	220	200	200	200
25	220	240	240	200	220	230	240	230	215	205	205	200
26	250	220	220	250	280	290	240	U220 <sub>G</sub>	C	200	200	200
27	220	215	240	220	220	230	235	210	200	180	195	200
28	240	235	235	220	220	220	240	220	210	200 <sub>H</sub>	200	195
29	235	225	210	220	210	E	230	215	200	185	195	190
30	235	230	225	210	210	260	240	215	200	200	195	190
Mean	235	235	235	235	230	260	245	230	220	210	205	205
Median	235	225	225	230	225	260	245	230	220	210	200	205
Count	30	29	29	29	27	29	29	28	25	25	26	27

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit: Km.

Month: November 1960

TABLE 52—*contd.*

Ionospheric Data

75°0'E Mean Time

Latitude: 10°2' N

Longitude: 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
205	210	220	240	250	275	360	F	320	280	260	230	1
200	220	200	235	250	285	380	310	250	240	240	240	2
215	215	210	235	250	280	320	280	240	225	235	220	3
220	220	210	220	250	295	355	330	300	280	240	245	4
200	200	215	240	250	280	375	340	265	250	280	250	5
215	205	215	230	255	290	375	325	275	240	245	235	6
205	215	230	235	260	290	360	345	300 <sub>F</sub>	255	260	250	7
210	210	215	230	250	285	400	F	F	F	270 <sub>F</sub>	240	8
205	215	220	230	250	270 <sub>II</sub>	400 <sub>F</sub>	450 <sub>F</sub>	F	340 <sub>F</sub>	F	260 <sub>F</sub>	9
200	220	220	B	B	300	385	370	330	310	280	235	10
220	215	230	240	260	275	290	280	255	255	250	255	11
205	205	225 <sub>B</sub>	235	255	290	395	F	F	360 <sub>F</sub>	250	210	12
C	C	B	255	250	255	205	310	300	265	270	280	13
C	220	235	235	255	280	325	330	330	280	260	220	14
245	220	225	230	250	275	330	400	420	370	310	265	15
310	220	250 <sub>B</sub>	240	250	280	320	300	285	240	225	230	16
200 <sub>II</sub>	200 <sub>II</sub>	220	220	240	260	340	330	315	315	285	265	17
220	200	240	225	240	280	435	F	340	F	F	245	18
215	215	245	250	245	265	320	305	300	265	230	220	19
210	205	250	245	235	280	340	300	250	225	240	240	20
205	215	215	230	245	270	300	230	220	220	245	270	21
220	A	220	220	220	260	270	270	270	265	240	230	22
200	200	220	220	240	260	320	300	240	220	240	240	23
200	190	220	220	240	265	300	265	220	220	220	205	24
200	C	C	C	240	260	300	320	260	240	245	240	25
A	215 <sub>A</sub>	220	220	245	270	340	325	320	260	240	245	26
200 <sub>II</sub>	200	235	210	230	255	275	265	260	245	235	240	27
180	200	200 <sub>II</sub>	205	240	265	320	305	270	265	250	245	28
185	200	210	215	235	260	290	265	265	260	240	235	29
190	190	220 <sub>B</sub>	220	240	260	300	320	320	270	260	250	30
205	210	225	230	245	275	335	315	285	265	250	240	Mean
205	210	220	230	250	275	330	310	275	260	245	240	Median
27	27	28	28	29	30	30	26	27	28	28	30	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

610

Characteristic : h'E

TABLE 53

Latitude : 10° 2' N

Unit : Km.

Ionospheric Data

Longitude: 77.5° E

Month : November 1960

75°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								A	A	A	A	A
2							140	A	A	A	A	A
3								105	C	C	C	A
4									A	A	A	A
5							C	C	C	C	C	C
6								115	A	A	A	A
7								115	A	A	A	A
8								A	A	A	A	A
9								115	A	A	A	A
10								A	A	A	A	A
11								105	A	B	B	B
12									115	B	A	C
13									115	B	A	C
14									B	B	B	B
15								120	B	B	B	B
16									B	B	B	B
17									C	C	A	A
18									C	C	A	A
19								C	C	C	A	A
20									A	A	A	A
21									C	C	C	B
22									C	C	A	B
23									C	C	A	B
24								C	C	C	A	B
25									C	C	A	A
26								A	C	C	C	C
27									C	C	A	B
28									C	C	A	A
29								C	C	C	A	A
30									C	C	A	A
Count							1	6	2	..	..	..
Median							..	115	..	..	..	..
Mean							..	110	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

610

611

Characteristic : h'E  
Unit : Km.  
Month : November 1960

TABLE 53  
Ionospheric Data  
75°E Mean Time

Latitude : 10.2° N.  
Longitude : 77.5° E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A								1
A	A	105	A	A								2
A	A	A	A	A								3
A	A	A	A	A								4
C	A	A	A	A								5
A	A	A	A	A								6
A	A	A	A	A								7
A	A	A	A	A								8
A	110	110	110	A								9
A	A	A	B	B								10
B	B	B	A	120								11
A	A	A	B									12
C	C	C	B									13
B	C	B	B	115								14
B	B	B	B									15
B	B	B	B									16
A	A	A	B									17
A	A	A	C									18
A	C	C	A									19
B	A	B	B									20
C	C	100	B									21
B	B	C	C									22
B	B	A	C									23
A	B	A	C									24
A	B	B	C									25
A	C	C	B									26
B	B	A	C									27
A	B	A	C									28
A	B	A	C									29
A	A	A	C									30
...	1	3	1	2								Count
..	..	..	..	..								Median
..	..	..	..	..								Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

611



Characteristic : h'E

Unit : Km.

Month : November 1960

TABLE 53—*contd.*

Ionospheric Data

75°E Mean Time

Latitude : 10° 2' N.

Longitude : 77° 5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							120H	A	A	A	A	A
2							115	A	A	A	A	A
3							..	110	A	C	A	A
4							..	A	A	C	A	A
5							C	C	C	C	C	C
6							..	A	A	A	B	A
7							115	120	A	A	A	A
8								A	A	A	A	A
9								115	115	A	A	A
10								A	A	A	A	A
11								A	B	B	B	B
12								..	115	110	A	A
13								115	115	105	C	C
14								A	B	B	B	B
15								B	B	B	B	B
16								..	B	B	B	B
17								..	B	A	B	A
18								C	C	A	A	A
19								C	C	C	A	A
20								C	A	A	A	A
21								C	C	C	B	B
22								C	C	A	B	B
23								C	C	A	B	B
24								C	C	A	A	A
25								C	C	A	B	A
26							A	C	C	A	A	A
27								..	C	A	B	A
28								C	C	A	A	A
29								C	C	A	A	B
30								C	C	A	A	A
Mean							..	..	..	..	..	..
Median							..	..	..	..	..	..
Count							3	4	3	2	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E

Unit : Km.

Month : November 1960

TABLE 53—*contd.*

Ionospheric Data

75°E Mean Time

Latitude : 10.2° N.

Longitude : 77.5° E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
A	A	A	A	A								1
110	A	115	A	..								2
A	A	A	A	..								3
A	A	A	A	A								4
A	A	A	A	A								5
A	A	A	A	A								6
A	A	A	A	A								7
A	110	100	A	..								8
A	A	B	B	B								9
												10
B	B	B	A	..								11
A	A	B	B	..								12
C	C	B	B	..								13
C	B	B	B	..	..	..	..	..	..	..	..	14
B	B	B	B	..	..	..	..	..	..	..	..	15
B	B	B	B	..	..	..	..	..	..	..	..	16
A	A	B	..	C								17
A	A	C	C	C								18
A	A	A	A	..								19
A	A	B	B	A								20
C	105	B	B	..								21
B	C	C	..	..								22
B	A	C	..	..								23
B	C	C	C	..								24
												25
A	A	B	B	..								26
B	B	A	C	..								27
A	A	C	..	..								28
B	B	C	C	C								29
A	A	C	C	A								30
..	..	..	..	..								Mean
..	..	..	..	..								Median
1	2	2	..	..								Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km.

Month : November 1960

TABLE 54  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N.

Longitude : 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1							G	100	100	100	100	100
2								100	100	100	100	100
3	100	100						G	C	C	C	100
4									100	100	100	100
5		C	C	C	C	C	C	C	C	C	C	C
6								G	100	100	100	100
7								G	100	100	100	100
8								100	100	100	100	100
9								100	100	100	100	100
10								100	100	100	100	100
11								G	100	B	B	100
12									100	100	100	C
13									G	G	100	C
14			100	120	..	..	..	G	G	B	B	95
15			..	..	..	..	..	G	B	B	B	B
16			105	105	..	..	..		G	G	G	90
17									C	C	100	95
18									C	C	100	100
19									C	C	100	100
20									100	100	100	100
21									C	100	100	95
22									C	C	100	G
23									C	C	95	95
24									C	C	95	95
25									C	C	95	95
26								100	C	C	C	C
27									C	C	90	90
28									C	C	95	90
29									C	C	90	90
30									C	C	100	100
Mean	..	..	..	..	..	..	..	100	100	100	100	95
Median	..	..	..	..	..	..	..	100	100	100	100	100
Count	1	1	2	2	..	..	..	6	11	11	23	24

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km.

Month : November 1960

TABLE 54  
Ionospheric Data  
75°E Mean Time

Latitude: 10°2' N.

Longitude: 77°5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
100	100	100	100	100					105			1
100	100	100	100	100					105	110	100	2
100	100	100	100	100								3
100	100	100	100	100								4
C	100	100	100	100								5
100	100	100	100	100						105	105	6
100	100	100	100	100						100	105	7
100	100	100	100	100								8
100	100	100	100	100								9
100	100	100	100	100								10
G	100	100	100	100				C				11
100	100	100	100	100								12
C	C	C	G	..								13
100	C	100	G	100				105	100			14
B	95	100	G	..								15
G	100	90	G	..								16
95	95	95	G	..								17
100	100	100	C	C								18
100	C	C	100	100								19
100	100	G	G	C								20
95	C	G	G	..								21
100	G	105	C	..					105			22
95	95	95	C	..								23
95	95	95	C	..	95							24
95	95	95	C	C								25
100	C	C	G	C								26
90	90	90	C	..								27
90	90	90	C	..								28
90	90	90	C	C								29
100	100	100	C	110							100	30
100	100	100	100	100	..	..	..	..	..	..	..	Mean
100	100	100	100	100	..	..	..	..	..	..	..	Median
25	24	25	13	13	1	..	..	1	4	3	4	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

TABLE 54—*contd.*

Latitude: 10.2° N.

Unit : Km.

Ionospheric Data

Longitude: 77° 5' E.

Month : November 1960

75° E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							G	100	100	100	100	100
2							G	100	100	100	100	100
3								G	100	C	100	100
4								100	100	100	100	100
5								C	C	C	C	C
6								100	100	100	100	100
7		100					G	G	100	100	100	100
8								100	100	100	100	100
9								100	100	100	100	100
10								100	100	100	100	100
11								100	B	B	100	100
12									100	100	100	100
13								G	100	G	C	C
14			100	105				100	B	B	90	100
15								B	B	B	B	B
16				105					G	100	90	90
17									G	100	95	95
18								C	C	100	100	100
19								C	C	C	100	100
20								C	100	100	100	100
21								C	C	100	100	95
22								C	C	100	95	G
23								C	C	95	95	95
24								C	C	95	95	95
25								C	C	95	G	95
26							100	C	C	100	100	100
27								C	C	90	90	90
28								C	C	95	95	90
29								C	C	90	90	90
30								C	C	100	100	100
Mean	..	..	..	..	..	..	..	..	100	100	100	100
Median	..	..	..	..	..	..	..	..	100	100	100	100
Count	1	1	2	..	..	..	1	9	12	23	26	26

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

617

Characteristic : h'Es

TABLE 54—*contd.*

Latitude: 10.2° N.

Unit : Km.

Ionospheric Data

Longitude: 77° 5' E.

Month : November 1960

75°E Mean Time

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
100	100	100	100	105				105	120			1
G	100	G	100						105	100	100	2
100	100	100	100									3
100	100	100	100	100								4
100	100	100	100	100								5
100	100	100	100	105						105	105	6
100	100	100	100	100						100	100	7
100	100	100	100									8
100	100	G	100									9
100	100	100	B	B								10
100	100	100	100									11
100	100	100	100									12
C	C	B	100									13
C	100	G	100					100				14
95	95	G	G	100								15
G	G	G	G									16
95	95	G	C	C								17
100	100	C	C	C								18
100	100	100	100									19
100	100	G	G	95						100		20
C	G	95	G									21
100	100	C	C									22
95	95	C	C									23
95	95	C	C		95	..	100	..				24
G	C	C	C									25
100	100	G	G									26
90	100	90	C									27
90	90	C	C									28
90	90	C	C	C					100			29
100	100	C	C	100							100	30
100	100	100	100	100	..	..	..	..	..	..	..	Mean
100	100	100	100	100	..	..	..	..	..	..	..	Median
24	26	13	14	8	1	..	1	2	3	4	4	Count

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

617

Characteristic : (M 3000) F<sub>2</sub>

TABLE 55

Latitude 10.2° N.

Unit : —

Ionospheric Data

Longitude 77.5° E.

Month : November 1960

75°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	3.20	3.10	3.10	3.05	3.10	3.20	3.00	2.80	2.40	2.50	2.40	2.50
2	3.15	3.30	3.30	3.30	3.35	3.20	3.05	2.95	2.60	2.55	2.40	2.50
3	U3.15s	3.20	3.35	3.40	3.30	3.30	3.00	3.05	C	C	C	2.40
4	3.25	3.30	3.45	3.30	3.25	3.30	3.05	2.95	2.60	2.40	2.40	2.40
5	F	C	C	C	C	C	C	C	C	C	C	C
6	3.05	3.20	3.30	3.40	3.45	3.50	3.05	2.90	2.55	2.50	2.50	2.45
7	3.10	3.30	3.20	3.15	3.20	3.30	3.05	3.05	2.90	2.65	2.30	2.40
8	3.00	3.15	3.20	3.25	3.30	3.40	3.10	2.95	2.70	2.45	2.30	2.30
9	U3.10F	3.20	3.40	3.30	3.30	3.25	2.95	3.05	2.75	2.60	2.50	2.45
10	U2.65F	U2.90F	3.15F	3.30F	3.30	3.35	3.00	2.85	2.60	2.50	2.50	2.40
11	C	C	C	C	C	C	C	C	2.75	2.70	2.45	2.30
12	3.05	3.20	3.25	U3.20s	3.30	3.40	3.05	3.05	2.75	2.55	2.40	C
13	3.30	3.00	2.55	2.75	2.35	E	2.80	3.20	2.95	2.60	2.60	C
14	2.90	2.90	2.40	J2.60R	2.65	E	3.00	3.25	2.85	2.70	2.50	2.35
15	3.10	3.20	3.30	3.25	3.00	3.35	3.05	2.90	3.00	2.50	2.45	2.35
16	U2.90F	3.00	2.90	2.90	3.40	3.20	3.15	2.95	2.90	2.95	2.45	2.40
17	3.25	3.30	3.40	3.40	3.40	E	3.00	3.10	2.80	2.55	2.50	2.55
18	F	F	3.05	2.95	3.20	3.45	3.20	3.10	3.00	2.60	2.50	2.50
19	F	3.15	3.30	F	3.50	E	3.00	2.85	2.55	2.60	2.50	2.50
20	3.30	3.30	3.35	3.40	3.40	3.55	3.05	2.95	2.70	2.40	2.45	2.50
21	3.20	3.35	3.35	3.25	3.40	3.50	3.25	3.10	2.75	2.50	2.50	2.60
22	2.95	2.90	U3.15R	3.35	3.30	U3.45R	3.10	2.95	2.95	2.75	2.70	2.70
23	3.15	3.15	3.50	3.45	R	E	3.00	2.90	2.85	2.75	2.55	2.65
24	3.15	3.25	3.40	3.40	3.65	E	3.20	3.20	2.90	2.45	2.55	2.60
25	3.35	3.20	3.15	3.50	3.50	3.50	3.30	3.30	3.10	2.90	5.90	2.95
26	3.10	3.10	3.35	3.45	3.20	U3.20R	2.80	2.90	2.65	C	C	C
27	3.10	3.35	3.20	3.30	3.30	J3.45R	3.35	3.25	2.85	2.60	2.60	2.65
28	3.10	3.05	3.20	3.25	3.35	3.55	3.25	2.75	2.85	2.50	2.60	2.65
29	3.00	3.10	3.35	3.30	3.35	3.45	3.25	3.10	2.65	2.60	2.60	5.60
30	3.15	3.15	3.20	3.40	3.50	3.50	3.15	3.20	3.00	2.65	2.55	2.65
Mean	3.10	3.15	3.20	3.25	3.25	3.40	3.10	3.00	2.80	2.60	2.50	2.50
Median	3.10	3.20	3.30	3.30	3.30	3.40	3.05	3.00	2.80	2.60	2.50	2.50
Count	26	27	28	27	27	22	28	28	28	27	27	26

Sweep 1.0 Mc, to 25.0 Mc in 27 seconds.

Characteristic : (M 3000) F<sub>2</sub>

Unit :—

Month : November 1960

TABLE 55

Ionospheric Data

75°E Mean Time

Latitude 10°2' N.

Longitude 77°5' E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
2.45	2.45	2.40	2.30	2.30	2.30	2.30	2.25	2.30	2.50	2.65	F	1
2.55	2.55	2.55	2.60	2.60	2.50	2.25	F	2.50 <sub>F</sub>	2.75	3.00	3.10	2
2.35	2.40	2.45	2.50	2.55	2.65 <sub>R</sub>	2.45 <sub>R</sub>	2.55	2.80	3.10	3.20	3.30	3
2.35	2.40	2.40	2.35	2.40	2.40	2.40 <sub>R</sub>	2.35 <sub>R</sub>	2.60	2.75 <sub>R</sub>	F	3.00	4
C	2.40	2.30	2.35	2.40	2.30	2.20	2.15 <sub>F</sub>	F	2.65	F	2.90	5
2.35	2.30	2.30	2.35	2.30	2.35	2.25	2.20	2.50	2.60	2.70	2.85	6
2.35	2.35	2.30	2.30	2.20	2.15	2.20	2.15	2.35	2.55	2.70	2.80	7
2.35	2.20	2.25	2.35	2.30	2.20	2.20	2.20 <sub>F</sub>	F	F	F	2.80 <sub>F</sub>	8
2.35	2.35	2.40	2.45	2.35	2.25	2.05	2.05 <sub>F</sub>	F	F	F	2.75 <sub>F</sub>	9
2.35	2.30	2.30	2.30	2.30	2.40	2.20	F	2.20 <sub>F</sub>	2.35	2.55	2.65	10
2.25	2.40	2.30	2.25	2.10 <sub>s</sub>	2.30	2.50	2.55 <sub>s</sub>	C	2.75	2.00 <sub>s</sub>	2.00 <sub>s</sub>	11
2.35	2.30	2.20	2.25	2.35	2.35	2.15	2.00	F	F	2.55	2.85	12
C	C	C	2.20	2.00 <sub>H</sub>	2.35	2.65	R	2.20	2.45	2.50	2.65	13
2.30	C	2.20	2.30	2.40	2.30	2.30	2.35	2.40	2.40 <sub>F</sub>	2.65 <sub>F</sub>	2.85	14
2.40	2.30	2.35	2.40	2.40	2.40	2.20	2.10	2.10	F	F	F	15
2.50	2.50	2.50	2.60	2.75	R	R	2.70	2.75	3.00	3.00	3.20	16
2.40	2.40	2.40	2.45	2.55	2.65	2.50	2.45	2.45	2.55 <sub>F</sub>	F	F	17
2.40	2.35	2.40	2.40	2.45	2.35	2.30	2.20 <sub>F</sub>	2.40	F	F	2.85	18
2.50	2.50	2.55	2.60	2.65	R	2.45	2.50	R	2.75	3.00	3.25	19
2.45	2.40	2.50	2.60	C	2.85	2.55	2.55	2.75	3.10	3.25	3.20	20
2.55	2.65	2.75	2.70	2.65	2.65	2.40	2.50	2.90	3.30	3.10	3.00	21
2.55	2.65	2.60	2.65	2.65 <sub>R</sub>	2.60	R	2.70 <sub>R</sub>	2.70	2.75	3.00	3.05	22
2.55	2.60	2.55	2.55	2.65	2.60	2.55	2.50	2.70	3.05	3.10	3.15	23
2.60	2.55	2.50	2.60	2.70	2.80	2.70	2.80	2.95	3.20	3.35	3.30	24
2.90	2.90	2.80	C	C	R	2.55	2.45	2.65	2.80	3.00	3.10	25
2.75	C	C	2.75	C	2.45 <sub>R</sub>	2.30	2.30	2.35	2.50 <sub>F</sub>	3.00	3.00	26
2.60	2.65	2.70	2.80	2.80	2.85	2.75	2.80	2.90	3.05	3.10	3.05	27
2.70	2.60	2.65	2.55	2.45	2.25	2.40	2.55	2.65	2.70 <sub>F</sub>	2.75	2.85	28
2.55	2.50	2.50	2.50	2.50	2.60	2.55	2.65	2.70	2.80	3.00	3.05	29
2.55	2.55	2.50	2.50	2.45	2.55	2.50	2.40	2.55	2.60	2.70	2.95 <sub>F</sub>	30
2.50	2.45	2.45	2.45	2.45	2.45	2.40	2.40	2.55	2.75	2.90	3.00	Mean
2.45	2.40	2.40	2.45	2.45	2.40	2.40	2.45	2.60	2.75	3.00	3.00	Median
28	27	28	29	27	27	28	27	24	25	23	27	Count

Sweep 1.0 Mc<sup>2</sup> to 25.0 Mc. in 27 seconds.



Characteristic : (M 3000) F2

TABLE 55—*contd.*

Latitude 10° 2' N.

Unit :—

Ionospheric Data

Longitude 77° 5' E.

Month : November 1960

75°E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	3.20	3.10	3.05	3.05	C	3.05	2.90	2.55	2.50	2.50	2.40	2.45
2	u3.35 <sub>F</sub>	3.30	3.30	3.30	3.20	2.75	3.05	2.80	2.60	2.50	2.50	2.55
3	3.20	3.30	3.35	3.30	3.25	2.70	3.10	3.00	2.80	C	2.45	2.40
4	3.30	3.30	3.45	3.40	3.20	2.75	3.05	2.75	2.40	2.60	2.30	2.40
5	F	C	C	C	C	C	C	C	C	C	C	C
6	3.05	3.30	3.30	3.40	3.40	2.80	3.00	2.70	2.50	2.50	2.50	2.40
7	3.20	3.25	3.25	3.15	3.20	3.00	3.15	3.00	2.75	2.40	2.20	2.40
8	3.10	3.30	3.25	3.35	3.40	2.70	3.05	2.80	2.50	2.40	2.30	2.35
9	3.20 <sub>F</sub>	3.35	3.45	3.40	3.30	2.75	3.05	2.85	2.65	2.50	2.45	2.45
10	F	u3.15 <sub>F</sub>	F	3.40	3.30	2.75	2.95	2.70	2.50	2.45	2.45	2.40
11	C	C	C	C	C	C	C	2.80	2.70	2.50	2.40	2.30
12	3.10	3.20	3.20	3.30	3.35	2.70	3.10	2.95	2.65	2.40	2.40	2.35
13	3.15	2.60	2.80	2.65	F	2.45	3.20	3.10	2.90	2.80	C	C
14	2.85	2.65	2.45	2.60	2.70	2.70	3.25	3.00	2.75	2.60	2.45	2.30
15	3.15	3.30	3.30	3.15	3.10	3.20	3.00	B	2.75	2.40	2.40	2.40
16	F	2.90	2.85	3.15	3.30	3.30	3.10	2.80	3.00	2.65	2.50	2.40
17	3.30	3.25	3.30	3.35	R	E	3.20	2.95	2.60	2.45	2.50	2.50
18	u2.85 <sub>F</sub>	3.00	3.05	u3.15 <sub>F</sub>	3.30	3.35	3.25	3.05	2.75	2.45	2.50	2.40
19	3.10	3.20	3.30	3.45	3.45	2.95	2.95	2.65	2.55	2.50	2.50	2.50
20	3.30	3.40	3.40	3.40	3.45	2.80	3.00	2.75	2.60	2.35	2.45	2.50
21	3.30	u3.35 <sub>s</sub>	u2.40 <sub>s</sub>	3.30	3.40	2.90	3.25	2.90	2.55	2.50	2.50	2.55
22	2.90	3.00	3.20	3.40	R	3.20	3.00	2.90	2.85	2.75	2.70	2.60
23	3.15	3.40	3.50	3.50	E	E	3.10	2.95	2.75	2.60	2.65	2.60
24	3.15	3.30	u3.40 <sub>s</sub>	3.55	R	2.90	u3.30 <sub>s</sub>	3.05	2.70	2.50	2.75	2.50
25	3.30	3.20	3.30	3.60	u3.50 <sub>R</sub>	2.80 <sub>H</sub>	3.30	3.20	3.05	2.95	2.90	2.90
26	3.10	3.30	u3.50 <sub>R</sub>	3.25	3.15	3.05	3.00	u2.75 <sub>G</sub>	C	2.65	2.65	2.70
27	3.10	3.40	3.30	3.35	3.35	3.30	3.40	3.05	2.70	2.65	2.60	2.70
28	3.10	3.20	3.25	3.35	3.35	3.40	3.05	2.75	2.65	2.65	2.60	2.70
29	3.10	3.10	3.15	3.45	3.45	E	3.30	2.90	2.65	2.60	2.55	2.65
30	3.10	3.20	3.30	3.45	3.55	u3.15 <sub>R</sub>	3.20	3.10	2.85	2.55	2.60	2.60
Mean	3.15	3.20	3.25	3.30	3.30	2.95	3.10	2.90	2.70	2.55	2.50	2.50
Median	3.15	3.25	3.30	3.35	3.30	2.90	3.10	2.90	2.70	2.50	2.50	2.50
Count	26	28	27	28	22	25	28	28	28	28	28	28

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M 3000) F<sub>2</sub>

Unit :—

Month : November 1960

TABLE 55—*contd.*

Ionospheric Data

75°E Mean Time

Latitude 10° 2' N.

Longitude 77° 5' E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.50	2.40	2.35	2.30	2.25	2.35	2.25	2.35	2.40	2.55	2.75	F	1
2.50	2.55	2.55	2.60	2.55	2.40 <sub>H</sub>	2.15	F	2.55 <sub>H</sub>	2.90	3.10	3.10	2
2.35	2.45	2.50	2.50	2.65 <sub>R</sub>	2.60 <sub>R</sub>	2.40	2.65 <sub>R</sub>	3.00	3.10	3.20	3.25	3
2.30	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.65 <sub>R</sub>	2.90	3.00	3.00	4
2.40	2.40	2.30	2.40	2.40	2.35	2.10	F	2.55	F	F	3.00	5
2.35	2.35	2.30	2.30	2.30	2.20	2.20	2.35	2.55	2.70	2.80	3.00	6
2.30	2.35	2.30	2.20	2.20	2.20	2.20	2.25	2.40	2.65	2.80	2.95	7
2.30	2.25	2.35	2.30	2.30	2.25	2.05	2.25 <sub>F</sub>	F	F	F	3.05 <sub>F</sub>	8
2.35	2.40	2.45	2.40	2.30	2.10	2.10	2.95 <sub>F</sub>	F	F	F	F	9
2.30	2.30	2.30	2.40	2.30	2.30	2.10	2.15 <sub>F</sub>	2.35	2.45	2.55	2.80	10
2.35	2.35	2.30	2.20 <sub>s</sub>	2.20	2.45 <sub>s</sub>	2.50 <sub>s</sub>	2.55	2.65	2.90 <sub>s</sub>	2.95 <sub>s</sub>	3.00	11
2.35	2.30	2.25	2.30	2.35	2.30	2.05	2.95 <sub>F</sub>	F	F	2.60	3.10	12
C	C	2.35	2.15	2.00 <sub>H</sub>	2.50	2.90	2.15	2.40	2.70	2.70	2.70	13
C	2.20	2.35	2.35	2.40	2.30	2.40	2.30	2.40 <sub>F</sub>	2.65	2.65 <sub>F</sub>	3.10	14
2.40	2.30	2.45	2.40	2.45	2.30	2.15	2.15	F	F	F	F	15
2.50	2.45	2.60	2.70	R	2.75 <sub>R</sub>	2.65	2.70	2.90	3.10	3.15	3.15	16
2.40	2.35	2.40	2.50	2.60	2.60	2.35	2.40	2.55	F	F	2.90	17
2.40	2.35	2.45	2.45	2.50	2.30	2.10	2.15	2.40	F	F	3.00 <sub>F</sub>	18
2.50	2.55	2.55	2.60	2.80 <sub>R</sub>	2.65	2.40 <sub>R</sub>	2.60	2.65	2.85	3.10	3.25	19
2.40	2.45	2.55	2.65	2.70	2.60	2.55	2.65	2.95	3.25	3.25	3.20	20
2.65	2.65	2.75	2.70	2.70	2.55	2.40	2.65	3.10	3.10	3.00	2.95	21
2.65	2.60	2.60	2.65	2.60 <sub>R</sub>	R	2.70 <sub>R</sub>	2.70	2.80	2.90	2.95	3.10	22
2.60	2.60	2.60	2.60	2.60	2.65 <sub>R</sub>	2.40	2.55	2.85	3.05	3.10	3.15	23
2.55	2.45	2.60	2.65	2.80 <sub>R</sub>	2.80	2.70	2.90	3.10	3.35	3.30	3.30	24
2.90	C	C	C	2.55 <sub>R</sub>	2.50	2.50	2.55	2.70	2.95	3.05	3.20	25
2.80	2.80	2.80	2.70	2.55	2.15 <sub>H</sub>	2.30	2.35	2.40	2.80	3.10	3.10	26
2.60	2.65	2.75	2.80	2.85	2.80	2.70	2.85	2.90	3.10	3.10	3.05	27
2.70	2.65	2.60	2.50	2.40	2.30	2.50	2.60 <sub>F</sub>	2.60	2.75	2.85	2.90	28
2.50	2.55	2.35	2.50	2.60	2.60	2.60	2.70	2.80	2.90	3.05	3.10	29
2.55	2.50	2.50	2.45	2.50	2.55	2.45	2.50 <sub>R</sub>	2.50	2.60	2.75	2.95 <sub>F</sub>	30
2.50	2.45	2.45	2.45	2.50	2.45	2.35	2.45	2.65	2.85	2.95	3.05	Mean
2.45	2.40	2.45	2.45	2.50	2.40	2.40	2.50	2.60	2.90	3.00	3.05	Median
28	28	29	29	29	29	30	27	26	23	24	27	Count

Sweep 1.0 Mc. to 25.0 Mc<sub>3</sub> in 27 seconds.

Characteristic : fo F<sub>2</sub>

Unit : Mc

Month : December 1960

TABLE 56

Ionospheric Data

75°E Mean Time

Latitude 10°2' N.

Longitude 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	7.4	6.8	6.9	6.1	3.3	E	4.6	8.0	9.6 <sub>H</sub>	10.3	12.0	11.8
2	F	F	F	F	F	8.0	5.1	8.6	9.8	10.6	10.8	11.2
3	8.4	7.7 <sub>F</sub>	7.0	6.2	5.0	3.7	5.8	9.9	11.6	11.7	12.2	12.0
4	8.6	9.3	7.8	6.5	5.3	3.6	5.6	9.1	11.0	11.4	11.6	11.6
5	8.2	7.8	7.4	7.1	6.1	4.2	5.6	9.2	10.8	10.6	10.1	10.6
6	9.0	9.4	8.2	6.6	C	C	C	C	C	C	C	C
7	10.0	10.3	10.1	9.8	9.3	7.1	6.6	9.5	10.9	10.6	10.9	11.0
8	8.0	7.2	6.5	5.9	5.7	4.8	5.9	9.4	11.7	12.2	11.6	11.6
9	F	8.4	F	7.8 <sub>F</sub>	7.6	6.0	6.0	9.4	11.6	12.5	12.8	12.3
10	9.8	9.0	C	8.2	6.4	4.6	5.6	9.3	11.0	11.8	11.8	11.1
11	8.0	7.7	7.4	6.6	6.2	4.7	5.5	9.1	11.4	11.5 <sub>R</sub>	10.7	9.6
12	8.3	7.2	6.0	5.4	5.4	5.7	6.6	9.8	11.8	11.9	11.5	10.9
13	8.8	8.5	7.9	7.7	6.6	5.2	6.0	9.5	11.1	11.2	11.4	10.8
14	8.3	7.6	6.0 <sub>S</sub>	4.5	3.3	E	4.5	8.3	10.2	10.2	10.5	10.6
15	7.0 <sub>S</sub>	6.6	6.3	5.6	5.2	4.8	6.0	9.1	11.0	12.0	12.2	11.7
16	C	C	C	C	C	C	C	C	10.8	11.6	12.6	12.8
17	7.2 <sub>S</sub>	5.7	4.8	4.5	3.4	3.5 <sub>R</sub>	5.4	8.3	10.0	10.6	10.9	10.8
18	7.7	6.8	6.2	6.0	5.8	5.8	6.2	8.1	9.4	9.5	9.8	10.0
19	8.9	8.4	7.4	6.8	6.4	6.3	7.4	9.4	9.8	9.8	9.6	10.2
20	6.9	6.6	5.4	4.0	3.3	3.4	4.7	8.0	9.8	9.8	9.8	10.6
21	3.8	3.4	3.5 <sub>R</sub>	3.6	3.8 <sub>V</sub>	3.7	F	F	8.8 <sub>H</sub>	8.7	8.6	8.7
22	8.0	6.8	4.3	3.5	3.8	3.3	4.3	7.4	9.3	9.7	8.6	8.8
23	7.2 <sub>S</sub>	6.6	5.4	4.3	2.8	E	4.0	7.7	C	C	7.9	8.3
24	6.2	5.7	5.3	4.7	3.3	2.2	3.8	7.3	8.5 <sub>H</sub>	7.0	7.0	7.5
25	6.0	6.4	5.8 <sub>S</sub>	4.5	3.6	2.8	4.2	7.3	8.4	7.8	7.5	7.5
26	5.3	5.1	5.4	4.0	3.3	2.8 <sub>R</sub>	3.8	7.0	8.4	8.8 <sub>R</sub>	7.4	7.4
27	5.6	5.4	5.4	4.8	4.7	4.6	4.6	7.7	8.7	7.7	7.9	7.7
28	6.8	6.1 <sub>S</sub>	4.9	4.1	3.5 <sub>R</sub>	3.0 <sub>R</sub>	4.4	8.0	9.5	9.5	8.7	9.0
29	7.5	6.4	5.8	5.8	5.6	4.0	4.3	7.8	10.2	11.0	10.4	9.8
30	10.0	9.8	8.4	4.9	2.9	E	3.9	8.0	9.4	9.0	8.9	9.2
31	6.1	5.6	6.1	6.0	5.9	4.0 <sub>R</sub>	4.1	7.8	9.5	9.9	8.7	8.5
Count	28	29	27	29	28	29	28	28	29	29	30	30
Median	7.8	6.8	6.1	5.8	5.1	4.0	5.2	8.3	10.0	10.6	10.4	10.6
Mean	7.6	7.2	6.4	5.7	4.9	4.5	5.2	8.5	10.1	10.3	10.1	10.1

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F2

TABLE 56

Latitude : 10° 2' N.

Unit : Mc

Ionospheric Data

Longitude : 77° 5' E.

Month : December 1960

75°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
12.2	11.8	12.2	12.8	12.8	R	11.8s	10.6	10.8F	F	10.6F	F	1
11.8	12.4	12.4	12.0	11.0	9.8	8.4	8.0	8.7F	9.0	8.2	8.0	2
11.9	12.2	12.4	12.3	11.2	11.3	10.8	9.9	9.4	8.7	10.2F	F	3
11.8	12.4	12.6	12.2	11.7	10.6	9.8	9.4	8.4	8.1	8.2	8.2F	4
10.8	11.0	10.9	10.6	10.0	9.5	9.3	9.2	9.0	8.7	7.8F	8.2	5
11.8	12.8	13.5	14.0	13.6	R	12.4	S	11.9s	12.2	11.1	10.6	6
11.7	12.2	12.1	11.8	11.4	10.3	8.8	8.9	8.9	8.8	8.8	8.4	7
12.4	12.7	12.7	12.2	11.8	11.6	11.6	12.0	11.7	10.6	9.8F	9.0	8
12.1	12.5	12.4	11.8	11.0	10.0	9.4	9.2	9.1	8.5	8.5	9.0	9
10.8	10.8	11.0	11.1	11.2	10.6	9.9	9.0	7.8	7.2	10.1s	7.2	10
9.2	9.4	9.7	9.8	9.8	9.8	9.6	9.0	8.4	8.4	8.2	8.7	11
10.7	10.5	10.0	9.9	9.7	9.7	9.7	9.0	7.7	7.6	7.9	7.8	12
10.8	11.1	11.6	11.6	11.7	11.2	9.5	8.3	8.3	8.8	8.7	8.1	13
10.8	10.8	11.2	11.2	11.3	11.0R	10.1	9.6	9.0	8.0	7.8	7.4	14
11.1	11.1	10.5	10.0	9.8	C	C	C	C	C	C	C	15
13.8	14.0	14.0R	R	11.8	10.1	9.9	10.4	9.5	10.4	11.2	9.8	16
11.0	11.1	11.1	10.9	10.9	10.5	10.5	10.5	11.2	11.0	9.7	8.6	17
10.9	11.4	11.6	11.6	10.8	10.7	9.4	8.6	8.5	8.6	8.6	8.8	18
10.8	12.1	12.8	12.7	11.8s	11.6	11.5	10.0	9.4	9.0	8.2	7.5	19
11.0	12.2	12.8	12.5	12.4	11.6	C	10.8	9.7	7.6	5.4	4.1	20
9.2	9.9	10.6	10.8	10.9	11.0	10.6	9.8	10.5s	9.2	9.6	8.6	21
9.8	11.2	11.6	11.4	11.7	11.5	10.8	10.8	10.2	8.2	7.5	6.8	22
8.8	9.8	10.7	11.5	11.8	11.5	10.8	10.8	10.2	10.1	8.1	7.4	23
C	9.0	9.3	9.8	10.4	10.4	9.4	8.2	7.8	8.5	7.7	6.5	24
8.1	8.7	10.0	11.0	11.2	11.3	10.6	9.2	9.3	6.7	7.3	5.6	25
8.2	9.0	9.7	10.7	11.2	11.0	10.6s	9.1	9.0	8.4	8.0	6.1	26
7.6	8.5	9.5	10.4	10.0	9.6	10.5s	9.9	9.8	9.0	10.2s	6.6	27
9.6	10.5	11.1	11.1	10.8	10.0	9.0	8.6	7.9	7.5	7.9	8.5	28
9.1	9.4	9.8	10.5	10.7	10.0	10.0	10.0	10.6F	8.9	8.5	9.0	29
9.5	9.8	10.3	10.7	10.8	10.7	10.5	10.7	10.4	9.0	8.2	10.1s	30
9.0	9.6	9.9	11.0	11.4	11.0	10.7	10.2R	9.5	9.0	8.3	8.3	31
30	31	31	30	30	28	29	29	30	29	30	28	Count
10.8	11.1	11.1	11.2	11.2	10.6	9.9	9.4	9.2	8.7	8.2	8.2	Median
10.5	11.0	11.3	11.3	11.2	10.6	10.1	9.6	9.3	8.7	8.3	7.8	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F<sub>2</sub>

Unit : Mc

Month : December 1960

TABLE 56—contd.

Ionospheric Data

75°E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	7.3	6.7	6.8	4.6	R	F	6.8	9.2	8.8	10.8	11.9	12.4
2	F	F	F	F	7.8 <sub>F</sub>	F	7.3	9.1	10.4	10.9	11.3	11.7
3	7.7	7.6 <sub>F</sub>	7.0	5.7	4.6	3.7 <sub>H</sub>	7.3	11.0	12.0	11.9	C	11.7
4	8.9	8.6	7.1	6.1	4.4	3.6	7.5	10.3	11.3	11.5	11.4	12.0
5	8.0	7.5	7.2	6.7	5.0	3.5	7.7	10.3	10.9	10.2	10.4	10.7
6	9.2	8.8	7.6	6.4	C	C	C	C	C	C	C	C
7	10.3	9.8	10.0	9.6	8.7	5.3	8.4	10.4	10.8	10.7	10.9	11.3
8	7.7	7.2	6.1	5.7	5.4	4.0	7.9	10.7	12.1	12.0	11.6	11.7
9	8.9 <sub>F</sub>	F	F	8.0	7.0	4.6	7.8	10.4	12.4	12.6	12.4	11.9
10	9.4	8.8	C	7.5	5.6	3.6	7.6	10.0	11.4	11.6	11.6	10.8
11	7.8	7.4	6.8	6.5	5.7	3.7	7.5	10.4	11.7	11.4	10.1	9.4
12	7.6	6.8	5.6	5.2	5.6	5.5	8.4	10.8	12.1	11.9	11.3	10.8
13	8.8	8.2	7.6	7.0	6.1	4.2	8.0	10.8	11.4	11.4	11.2	10.7
14	7.8	7.3 <sub>s</sub>	5.0	3.8	2.8	E	6.6	9.5	10.6	10.2	10.4	10.6
15	7.2	6.4	5.8	5.4	5.0	4.8	7.6	10.0	11.4	11.8	12.0	11.4
16	C	C	C	C	C	C	C	C	11.3	12.3	12.8	13.8
17	6.4	5.3	4.7	4.2	3.3	4.0	7.2	9.3	10.4	10.8	10.8	10.8
18	7.1 <sub>s</sub>	6.4	6.0 <sub>s</sub>	6.0	5.9	5.6	7.1 <sub>H</sub>	8.6	9.4	9.7	9.8	10.5
19	8.5	8.0	7.0 <sub>s</sub>	6.5	6.4	6.3	8.6	9.8	9.9	9.9	9.9	10.2
20	6.6	6.3	4.8	3.6	3.3	3.3	6.4	9.2	10.1	9.7	10.2	10.8
21	3.5	3.4	3.6	3.4	3.6	F	F	8.6	8.9	8.6	8.5	9.0
22	7.6	5.7	3.7	3.7	3.6	R	6.1	8.5	9.8	9.4 <sub>H</sub>	8.4	9.3
23	7.0	6.2	4.9	3.6	R	E	6.1 <sub>s</sub>	8.5	C	C	8.1	8.5
24	5.8	5.6	5.0	4.0	2.8	E	5.8	8.2	7.7	6.8	7.2	C
25	6.3	6.4	5.2	4.0	3.2 <sub>R</sub>	2.7	6.1	7.9	8.4	7.6	7.4	8.0
26	5.3	5.5	4.4	3.6 <sub>R</sub>	3.0 <sub>R</sub>	R	5.7	8.1	9.1 <sub>H</sub>	7.7	7.3	7.5
27	5.6	5.9 <sub>s</sub>	5.0	4.6	4.8	3.7	6.5	8.3	8.5 <sub>H</sub>	7.8	8.1	7.5
28	6.6	5.6	4.6	4.0	3.1	3.0	6.3	9.0	9.6	9.1	8.7	9.3
29	6.7	6.0	5.9	5.4	4.9	3.1 <sub>R</sub>	6.1	9.5	10.7	10.9	R	9.6
30	9.9 <sub>F</sub>	9.5	6.4	3.6 <sub>R</sub>	E	E	6.3	8.8	9.1	9.0	8.9	9.2
31	5.6	5.8	6.0	6.1	5.7	2.9	6.3	8.7	9.8	9.3	8.6	8.8
Count	29	28	27	29	27	24	28	29	29	29	28	29
Median	7.6	6.6	5.9	5.4	4.9	3.6	7.2	9.3	10.4	10.7	10.3	10.7
Mean	7.4	6.9	5.9	5.3	4.9	4.0	7.1	9.4	10.3	10.3	10.0	10.3

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F2

Unit : Mc

Month : December 1960

TABLE 56—contd.

Ionospheric Data

75°E Mean Time

Latitude : 10.2° N.

Longitude : 77.5° E.

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
11.9	12.1	12.4	13.2	R	R	u11.0c	u9.6s	10.0F	F	F	F	1
12.0	12.6	12.0	11.6	10.0	8.8	7.8	8.2	8.6	8.5	7.9	8.3	2
12.2	12.4	12.1	11.6	11.4	11.2	10.1	9.6	8.6	8.5	F	8.7	3
12.0	12.6	12.6	11.7	11.0	10.8	9.4	8.8	8.0	8.0	8.0	8.3	4
10.8	11.1	10.6	10.3	9.8	9.5	9.0	9.2	8.8	8.4	7.6	8.6	5
12.6	13.2	13.6	13.8	13.4	12.8	S	12.6	11.6	11.7	11.0	10.3	6
12.2	12.4	12.1	11.7	10.8	9.4	8.5	9.1	9.0	8.7	8.8	8.0	7
12.9	12.9	12.7	12.4	11.7	11.5	11.8	11.8	10.7	10.4	9.7F	9.4	8
12.3	12.8	12.0	11.4	10.8	10.0	9.2	9.6	9.6	8.6	8.8	9.3	9
10.7	11.1	10.9	11.0	10.8	10.5	9.6	8.5	u7.2s	u7.2s	7.2	7.5	10
9.5	9.4	9.7	9.7	9.8	9.8	9.2	8.7	8.5	8.3	8.6	8.5	11
10.6	10.4	10.0	9.8	9.7	9.6	9.4	8.0	7.5	7.7	8.0	8.4	12
10.8	11.5	11.6	11.8	11.5	u10.3R	8.7	8.2	8.7	8.8	8.4	8.3	13
10.9	10.8	11.1	11.3	j11.2R	10.7	9.5	9.2	8.4	7.8	7.6	7.0	14
11.2	10.8	10.1	10.0	C	C	C	C	C	C	C	C	15
14.1	14.3	R	j12.4HR	10.1	9.9	10.0	10.2	u10.2R	11.0	10.8	8.2	16
11.2	11.1	11.0	11.0	10.8	10.2	10.5	10.9	11.2	10.6	9.2	7.9	17
11.2	11.6	11.6	11.5	10.7	9.9	8.8	8.6	8.5	8.6	8.8	8.9	18
11.5	12.3	10.8	12.2	11.6	11.8	10.7	u9.6s	9.3	8.4	7.7	7.2	19
11.6	12.3	12.4	12.3	11.6	C	C	10.4	8.6	6.2	4.4	4.0	20
9.6	10.2	10.8	11.1	10.8	10.9	10.3	u9.6s	9.3	9.5	9.0	8.3	21
10.5	11.3	11.3	11.6	11.7	u11.2R	10.0	9.4	9.1	7.8	7.0	u7.1s	22
9.5	10.1	11.0	11.5	11.6	11.2	10.2	9.9	9.4	u8.1R	6.6	6.4	23
8.7	9.2	9.5	10.0	10.4	10.1	8.9	7.8	8.1	8.2	u7.0s	6.2	24
8.4	9.4	10.6	10.8	11.0	11.3	9.8	9.0	8.8	7.0	6.4	5.4	25
8.6	9.5	10.2	11.1	11.1	10.3	9.3	8.8	8.7	8.3	6.6	5.6	26
7.9	9.1	10.0	10.1	9.7	9.7	9.5	10.3	9.3	8.1	7.1	6.7	27
10.1	10.8	11.2	10.8	10.3	u9.5s	8.8	7.8	7.5	7.6	u8.5c	8.3	28
9.0	9.7	10.2	10.8	10.3	10.2	9.8	F	9.1	8.5	8.5	9.7	29
9.7	9.8	10.7	10.9	10.8	10.6	u10.2R	10.6	9.8	8.6	7.9	6.3	30
9.4	9.7	10.3	11.3	11.5	10.9	10.7	9.8	9.0	8.7	8.1	8.4	31
31	31	30	31	29	28	28	29	30	29	28	29	Count
10.8	11.1	11.0	11.3	10.8	10.3	9.6	9.4	8.9	8.4	8.0	8.3	Median
10.8	11.2	11.2	11.3	10.9	10.4	9.7	9.4	9.0	8.5	8.0	7.8	Mean

Sweep 1.0 Mc. to 25.0 in 27 seconds.

Characteristic of F<sub>1</sub>  
 Unit : Mc  
 Month : December 1960

TABLE 57  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10°2' N.  
 Longitude : 77°5' E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1							..	L	L	L	L	L
2							..	..	L	L	L	L
3							..	..	L	L	L	L
4							..	L	L	L	L	L
5							..	..	L	L	L	L
6							C	C	C	C	C	C
7							..	L	L	L	L	L
8							..	L	L	L	L	L
9							..	L	L	L	L	L
10							..	L	L	L	L	L
11							..	L	L	L	L	L
12							..	..	L	L	L	L
13							..	..	L	L	L	L
14							..	..	L	L	L	L
15							..	..	L	L	L	L
16							..	..	L	L	L	L
17							..	..	L	L	L	L
18							..	..	L	L	L	L
19							..	..	L	L	L	L
20							..	..	L	L	L	L
21							..	..	L	L	L	L
22							..	..	L	L	L	L
23							..	..	L	L	L	L
24							..	..	L	L	L	L
25							..	..	L	L	L	L
26							..	..	L	L	L	L
27							..	..	L	L	L	L
28							..	..	L	L	L	L
29							..	..	L	L	L	L
30							..	..	L	L	L	L
31							..	..	L	L	L	L
Count							..	..	..	..	..	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F<sub>1</sub>

Unit : Mc

Month : December 1960

TABLE 57

Ionospheric Data

75°E Mean Time

Latitude 10°2'N.

Longitude 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	L	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
L	L	L	L	L	L							5
L	L	L	L	L	L							6
L	L	L	L	L	L							7
L	L	L	L	L	L							8
L	L	L	L	L	L							9
L	L	L	L	L	L							10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
L <sub>H</sub>	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
L <sub>H</sub>	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
L	L	L	L	L	L							31
I	..	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : fo F<sub>1</sub>

Unit : Mc

Month : December 1960

TABLE 57—*contd.*

Ionospheric Data

75°E Mean Time

Latitude 10°2' N

Longitude 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	L
2								..	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5							..	..	L	L	L	L
6								C	C	C	C	C
7								L	L	L	L	L
8							L	L	L	L	L	L
9							L	L	L	L	L	L
10							L	L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16								..	L	L	L	L
17								L	L	L	L	L
18								..	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	L	L
25							..	L	L	L	L	L
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
31								..	L	L	L	L
Count							..	..	..	..	1	..
Median							..	..	..		..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo F1

Unit : Mc

Month : December 1960

TABLE 57—*contd.*

Ionospheric Data

75°E Mean Time

Latitude 10°2

Longitude 77°5° E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	..								5
L	L	L	L	L								6
L	L	L	L	..								7
L	L	L	L	..								8
L	L	L	L	..								9
L	L	L	L	..								10
L	L	L	L	..								11
L	L	L	L	..								12
L	L	L	L	L								13
L	L	L	L	..								14
L	L	L	L	..								15
L	L	L	L	L								16
L	L	L	L	L								17
L	L	L	L	..								18
L	L	L	L	L								19
L	L	L	L	L								20
L <sub>H</sub>	L	L	L	L								21
L	U4.8L	L	L	L								22
U4.8L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L								26
L <sub>H</sub>	L	L	L	L								27
L	L	L	L	L								28
L	L	L	L	L								29
L	L	L	L	..								30
L	L	L	L	L								31
1	1	..	..	..								Count
..	..	..	..	..								Median
..	..	..	..	..								Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

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Characteristic : fo E

TABLE 58

Latitude 10°2' N

Unit : Mc

Ionospheric Data

Longitude 77°5' E

Month : December 1960

75°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									A	A	B	B
2									A	B	A	A
3									A	A	A	A
4									..	B	A	A
5									A	A	A	A
6								C	C	C	C	C
7									A	B	A	A
8									A	B	A	A
9									B	A	A	A
10									3.0	A	A	A
11								2.9	A	A	A	A
12								2.3	A	A	A	A
13									A	A	A	A
14									B	B	B	B
15									-	B	A	B
16								C	A	B	A	A
17									R	B	A	A
18									R	B	A	A
19									A	B	A	A
20									A	B	A	A
21									A	B	A	A
22									R	R	A	A
23								R	C	R	A	A
24									R	R	A	A
25								u2.4R	F	R	A	A
26									..	A	A	A
27									A	A	A	A
28								A	A	A	A	A
29									u4.0R	3.4	A	A
30									A	B	B	A
31									A	A	A	A
Count								3	2	1	..	..
Median								..	..	..	..	..
Mean								..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

630

631

Characteristic : fo E

TABLE 58

Latitude : 10.2°N

Unit : Mc

Ionospheric Data

Longitude : 77.5°E

Month : December 1960

75°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
B	R	3.6	B	B								1
A	A	A	A									2
A	A	A	B									3
B	A	A	B									4
A	A	A	B									5
A	B	B	B									6
A	A	A	A									7
A	A	A	B	A	A							8
A	A	A	B	A								9
A	A	A	A	A								10
A	A	A	A	A								11
A	A	A	A	A								12
B	A	A	B	R								13
B	A	A	B									14
B	A	A	B									15
B	B	A	B	R								16
A	A	A	R	u2.8R								17
A	B	A	B	B								18
B	R	B	B	R								19
A	B	B	B	A								20
A	A	A	u3.1R									21
u3.7R	B	R	R									22
A	A	3.3	B	B								23
C	A	A	A	A								24
A	A	R	B	u2.9R	A							25
A	A	A	B	u2.8R								26
A	A	A	A	A								27
A	B	A	A	A								28
A	A	A	A	A								29
B	B	B	B	A								30
A	A	A	A	u3.1R								31
1	..	2	1	4	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

631

Characteristic : fo E

TABLE 58—*contd.*

Latitude: 10°2' N

Unit : Mc

Ionospheric Data

Longitude: 77°5' E

Month : December 1960

75°E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								..	A	B	B	B
2								..	B	A	A	A
3								A	A	A	C	A
4								..	A	A	A	B
5								..	A	A	A	A
6								..	C	C	C	C
7								..	A	A	A	A
8								A	B	A	A	A
9								2.8	B	A	A	A
10								2.8	U3.2R	A	A	A
11								A	A	A	A	A
12								2.6	A	A	A	A
13								A	A	A	A	A
14								B	B	B	B	B
15								..	B	A	A	A
16								..	A	U3.4R	A	A
17								R	A	A	A	A
18								..	R	A	A	A
19								..	A	A	A	R
20								2.7	A	U3.4A	A	A
21								U2.8R	R	A	A	A
22								R	A	A	A	A
23								R	C	C	A	A
24								R	R	A	A	C
25								F	R	A	A	A
26								..	A	A	A	A
27								A	A	A	A	A
28								A	A	A	A	A
29								U3.6R	A	A	A	A
30								A	A	B	A	A
31								..	A	A	A	A
Count								6	1	2	..	..
Median								2.8	..	..	..	..
Mean								2.9	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo E  
Unit : Mc  
Month : December 1960

TABLE 58—*contd.*  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N  
Longitude : 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
B	3.6	B	B	..								1
A	A	A	..	..								2
A	A	B	B	..								3
A	A	B	...	..								4
A	A	B	..	..								5
R	B	B	..	..								6
A	A	A	A	..								7
A	A	B	B	A								8
A	A	B	B	..								9
A	A	A	A	..								10
A	A	A	A	..								11
A	A	A	A	..								12
A	A	B	B	..								13
B	A	B	B	..								14
B	A	B	A	..								15
A	A	B	R	R								16
A	A	R	R	..								17
A	A	B	B	..								18
R	B	B	R	..								19
A	B	B	R	A								20
A	A	u3.3R	B	..								21
R	R	B	..	..								22
A	B	B	B	A								23
A	A	A	A	A								24
A	F	R	u3.0R	R								25
A	A	A	B	u2.5R								26
A	A	A	A	A								27
A	B	u3.8R	A	R								28
A	A	A	A	..								29
B	A	B	3.2	..								30
A	B	A	B	3.0								31
..	1	2	2	2								Count
..	..	..	..	..								Median
..	..	..	..	..								Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo Es

Unit : Mc

Month : December 1960

TABLE 59  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									6.9	6.4	G	G
2									6.2	7.0	9.2	13.4
3								3.4	7.6	7.8	9.6	9.8
4									..	G	8.4	8.8
5								2.6	5.5	7.6	9.3	9.8
6					G	G	G	G	C	C	C	C
7									6.6	8.0	9.4	10.0
8									7.0	7.0	8.8	9.4
9									G	7.4	9.2	8.6
10	2.5	-	C						G	6.6	9.6	9.4
11	4.0	-	3.7					G	6.7	7.8	9.5	9.4
12								G	7.6	8.8	9.2	9.6
13									6.4	7.8	8.8	8.8
14									3.4	G	8.8	8.6
15									-	G	8.4	8.6
16	G	C	C	C	G	C	C	C	6.8	G	11.6	12.0
17									6.0	7.4	9.7	9.1
18									G	6.6	9.2	9.0
19									7.0	7.4	9.2	8.6
20	3.2	4.4	-						6.8	8.0	10.0	9.4
21								4.0	7.0	7.0	9.0	9.0
22								..	G	8.0	9.4	10.0
23								G	C	C	9.2	9.0
24	7.0	-	3.6					..	G	6.9	8.4	9.2
25	5.6							G	7.4	7.4	9.8	10.3
26								..	..	7.1	9.1	10.4
27								..	7.4	8.7	9.4	9.8
28								C	7.3	8.4	9.3	10.6
29									G	7.7	10.4	10.8
30									7.8	B	9.8	9.8
31									7.3	8.7	9.8	10.6
Count	5	1	2	..	..	..	..	7	26	28	30	30
Median	4.0	..	..	..	..	..	..	G	6.8	7.4	9.2	9.4
Mean	4.5	..	..	..	..	..	..	..	6.7	7.2	9.4	9.7

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo Es  
Unit : Mc  
Month : December 1960

TABLE 59  
Ionospheric Data  
75°E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
G	G	5.2	G	G								1
11.0	8.6	9.0	6.6									2
10.2	9.0	9.0	G									3
9.4	8.2	8.8	G									4
9.6	8.5	8.2	6.2									5
10.2	G	G	G									6
10.0	10.0	9.8	8.0									7
9.6	10.6	8.7	6.7	6.4	5.8							8
10.4	8.4	9.4	7.6	6.6								9
8.7	8.6	9.4	7.4	6.8							4.8	10
8.6	9.6	9.5	6.6	U7.0R								11
9.8	9.4	8.6	6.7	6.0								12
8.1	7.8	7.8	G	G								13
9.0	9.4	8.4	G									14
9.0	9.0	9.0	6.0		C	C	C	C	C	C	C	15
G	G	8.2	G	G								16
10.6	10.3	9.0	6.6	G								17
5.8	G	8.0	G									18
G	G	G	6.0									19
11.4	G	G	G	6.6		C						20
9.6	9.0	8.8	G						2.7			21
G	G	G	G									22
8.0	8.0	G	G	G	3.9							23
C	9.6	9.0	6.5	8.0	7.0							24
10.0	9.4	7.8	G	G								25
10.2	9.7	6.7	G	G								26
9.8	9.4	9.8	7.3	7.4								27
8.4	6.9	8.1	4.7	3.9					3.7	4.1		28
9.6	8.8	9.6	7.6	5.7								29
9.5	8.6	G	G	3.7								30
10.4	9.7	6.6	G	G						4.3		31
30	31	31	31	19	3	..	..	..	2	2	1	Count
9.6	8.6	8.4	G	3.9	..	..	..	..	..	..	..	Median
9.5	9.0	8.5	6.7	6.2	..	..	..	..	..	..	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : fo Es

Unit : Mc

Month : December 1960

TABLE 59—Contd.

Ionospheric Data

75°E Mean Time

Latitude : 10° 2' N.

Longitude : 77° 5' E.

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								..	6.8	G	G	G
2								..	G	8.6	10.6	11.7
3								6.8	7.8	9.8	C	9.5
4								..	7.2	8.2	8.8	8.8
5								3.6	6.8	8.3	9.4	9.6
6					C	C	C	C	C	C	C	C
7								..	7.2	9.6	9.8	8.8
8								6.5	6.8	9.2	8.4	8.6
9								8.4	B	9.8	8.7	8.4
10	1.9	..	C					G	G	9.6	9.0	9.0
11	3.2	..	..					6.4	7.3	9.2	9.4	8.8
12								G	8.2	9.6	9.4	10.2
13								6.8	6.8	8.8	8.0	8.6
14								2.8	G	8.1	8.8	8.6
15								—	G	8.0	8.7	9.2
16	C	C	C	C	C	C	C	C	9.4	7.2	12.3	11.0
17								G	6.8	9.7	8.6	10.7
18								..	5.6	7.8	9.0	9.0
19								..	7.0	9.0	9.2	G
20								6.0	7.8	9.2	10.0	8.8
21							8.0	G	G	9.0	9.0	9.0
22								G	6.6	9.0	9.2	9.2
23								G	C	C	9.0	9.6
24								6.8	6.6	7.8	8.5	C
25	4.0							G	8.3	8.8	9.6	10.2
26								..	8.1	7.7	9.6	9.6
27								6.8	8.4	9.6	9.7	9.2
28								6.6	C	10.0	10.4	10.2
29								G	4.3	9.8	10.0	10.8
30								C	7.6	8.6	10.6	9.6
31								..	7.8	8.8	9.9	10.0
Count	3	..	..	..	..	..	1	19	28	29	29	29
Median	..	..	..	..	..	..	..	3.6	6.8	9.0	9.2	9.2
Mean	..	..	..	..	..	..	..	6.1	7.2	8.9	9.4	9.5

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo Es

TABLE 59—Contd.

Latitude : 10°2'N

Unit : Mc

Ionospheric Data

Longitude: 77°5'E

Month : December 1960

75°E Mean Time

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
G	5.1	G	G									1
10.8	8.6	6.6	6.8									2
9.2	9.0	G	G									3
8.3	8.6	6.4	..									4
8.6	6.8	6.0	..									5
4.0	G	G	..									6
10.0	9.8	8.8	7.6									7
10.4	8.8	7.6	6.8	6.2	2.8	..	..	..	..	4.1	..	8
9.8	9.8	7.8	7.6							..	6.6	9
8.6	9.6	7.6	7.7							..	..	10
9.2	10.0	8.2	6.4							..	..	11
9.8	9.6	6.8	6.6									12
8.0	7.0	G	G									13
9.0	8.4	7.0	G									14
9.0	8.4	7.0	6.2	C	C	C	C	C	C	C	C	15
8.4	8.0	7.0	G	G					..	..	..	16
10.0	9.0	6.7	6.8	..					7.3	..	..	17
9.0	8.0	G	6.2	..					..	..	..	18
G	G	G	6.0	..					..	6.0	3.5	19
8.8	G	G	G	4.8	C	C			..	..	..	20
9.2	9.2	6.8	G	..								21
G	G	G	..	..								22
8.4	5.6	G	G	6.2	..	3.8	..	..	..	..	3.6	23
9.4	9.0	6.6	10.6	8.0	6.8	..	..	..	..	..	2.7	24
10.1	9.8	6.0	G	G					..	..	..	25
9.8	8.3	8.6	G	G								26
9.6	9.6	7.1	8.0	3.2								27
8.5	8.3	G	3.8	G					7.8a	..	..	28
9.6	9.2	8.1	7.0	..					..	..	4.0	29
8.4	7.8	G	G	..					..	..	..	30
10.4	B	6.9	G	G					2.7	..	..	31
31	31	31	27	10	2	1	..	..	3	2	5	Count
9.0	8.5	6.6	6.0	3.2	..	..	..	..	..	..	3.6	Median
9.1	8.5	7.2	6.9	5.7	..	..	..	..	..	..	4.1	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fo Es  
Unit : Mc  
Month : December 1960

TABLE 60  
Ionospheric Data  
75°E Mean Time

Latitude : 10.2°N  
Longitude : 77.5°E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								..	3.3	4.0	G	G
2								..	3.4	..	3.9	5.6
3								2.8	3.4	3.9	4.2	4.2
4								..	..	G	4.1	4.2
5								..	3.5	4.0	4.2	4.3
6												
7					C	C	C	C	C	C	C	C
8								..	3.6	..	4.2	4.2
9								..	3.4	..	4.0	4.2
10	2.0	..	C					..	G	4.0	4.0	4.2
11	2.8	..	2.8					..	G	3.8	4.0	4.0
12								G	3.2	3.8	3.9	4.2
13								G	3.6	3.8	4.0	4.0
14								..	3.5	..	4.0	4.0
15								..	..	G	..	..
16	C	C	C	C	C	C	C	..	..	G	3.9	4.2
17	..	..	..	..	..	..	..	C	3.4	..	4.7	5.4
18	..	..	..	..	..	..	..	..	..	..	3.8	4.0
19	..	..	..	..	..	..	..	..	G	..	3.7	3.8
20	2.6	2.5	..					2.7	..	..	3.8	4.0
21								..	..	..	4.0	4.0
22								..	3.4	..	3.8	4.0
23								..	G	3.8	3.8	4.0
24	..	..	2.7					..	C	..	3.8	4.0
25	2.3	..	..					G	G	..	3.6	3.8
26								..	..	..	3.7	3.9
27								..	..	3.6	3.7	3.8
28								..	3.2	3.6	3.8	3.8
29								2.5	3.2	3.6	3.8	3.8
30								..	G	3.9	3.9	4.1
31								..	3.3	..	4.3	4.1
								..	3.3	3.7	3.9	4.3
Count	4	1	2	..	..	..	..	6	21	16	29	99
Median	..	..	..	..	..	..	..	2.5	3.3	3.8	3.9	4.0
Mean	..	..	..	..	..	..	..	..	3.4	3.8	3.9	4.1

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fb Es

Unit : Mc

Month : December 1960

TABLE 60.  
Ionospheric Data  
75°E Mean Time

Latitude 10°2'N

Longitude 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
G	G	4.4	G	G								1
6.8	4.0	3.8	3.6									2
4.4	4.1	3.8	G									3
4.4	4.2	4.0	G									4
4.4	4.0	4.1									3.4	5
5.1	G	G	G									6
4.1	4.3	4.0	3.7									7
4.3	4.2	4.0	..	3.0	3.3							8
4.2	4.1	3.8	..	3.1								9
4.0	4.1	4.2	3.6	3.2								10
4.1	4.1	3.8	3.5	3.1								11
4.2	3.9	4.0	3.8	3.1								12
4.0	4.1	4.0	G	G								13
..	4.0	3.7	G									14
..	3.9	3.8			C	C	C	C	C	C	C	15
G	G	3.7	G	G								16
4.0	3.9	3.6		G								17
4.0	G	3.6	G	..								18
G	G	G	3.4	..								19
4.2	G	G	G	3.6		C						20
4.1	3.8	3.6	G	..								21
G	G	G	G	..								22
4.0	3.8	G	G	G								23
C	3.7	3.6	..	3.1	4.0							24
3.9	3.8	3.6	G	G								25
3.8	3.7	3.6	G	G								26
3.8	3.7	3.7	3.5	3.0								27
4.0	4.8	3.7	3.5	3.0					2.5	2.9		28
4.1	4.0	3.7	3.5	3.0								29
..	4.3	G	G	3.1								30
4.1	4.0	3.9	G	G								31
26	31	31	25	19	2	..	..	..	1	1	1	Count
4.1	3.9	3.7	G	3.0	..	..	..	..	..	..	..	Median
4.3	4.0	3.8	3.6	3.1	..	..	..	..	..	..	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fb Es  
Unit : Mc.  
Month : December 1960

TABLE 60—Contd.  
Ionospheric Data  
75° E Mean Time

Latitude 10°2' N  
Longitude 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
11								..	3.7	G	G	G
12								..	G	4.1	3.9	6.8
13								3.3	3.6	3.8	C	4.2
14								..	3.7	4.2	4.0	..
15								3.2	3.6	4.0	4.2	4.5
16								..	C	C	C	C
17								..	3.6	4.0	4.3	4.2
18								3.3	..	3.8	4.0	4.3
19								3.2	..	3.8	4.2	4.2
20								G	G	3.9	4.0	4.0
21	3.0							3.1	3.6	3.9	3.9	4.1
22								G	3.5	3.8	4.1	4.1
23								3.0	..	3.8	4.0	4.0
24								..	G	3.8	..	..
25								..	G	3.8	4.0	4.2
26								..	4.3	4.0	5.1	4.2
27								G	..	3.6	4.0	3.9
28								..	..	3.8	3.8	4.0
29								..	..	3.7	4.0	G
30								3.0	..	3.6	3.9	4.0
31							3.8	G	G	3.8	4.0	3.9
								G	3.4	3.6	4.0	3.8
								G	C	C	3.8	4.0
	2.1							..	..	3.5	3.7	C
								G	..	3.6	3.7	3.8
26								..	3.4	3.8	3.7	3.8
27								2.9	3.5	3.7	4.0	3.9
28								2.9	3.3	3.7	3.9	4.1
29								G	3.6	3.7	4.1	3.9
30								2.9	3.5	..	4.3	4.3
31								..	3.5	3.9	3.9	4.3
Count	2	..	..	..	..	..	1	18	20	28	28	27
Median	..	..	..	..	..	..	..	2.9	3.5	3.8	4.0	4.0
Mean	..	..	..	..	..	..	..	3.1	3.6	3.8	4.0	4.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fb Es

Unit : Mc

Month : December 1960

TABLE 60—Contd.

Ionospheric Data

75°E Mean Time

Latitude 10°2' N

Longitude 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
G	3.8	G	G	..								1
4.1	4.0	3.8	..	..								2
4.0	3.8	G	G	..								3
4.1	4.1	..	..	..								4
4.4	4.1	..	..	..								5
C	G	G	..	..								6
4.2	4.2	3.7	3.5	..								7
4.3	4.2	..	..	3.3								8
4.2	4.1	..	..	..								9
4.0	4.0	3.9	3.5	..							3.0	10
4.2	4.0	3.8	3.5	..								11
4.0	3.9	4.0	3.5	..								12
4.0	4.0	G	G	..								13
..	4.2	..	G	..								14
..	3.8	..	..	..								15
4.0	3.8	..	G	G								16
4.0	3.8	..	..	..								17
4.2	3.8	G	..	..								18
G	G	G	3.2	..						3.2	2.7	19
4.2	G	G	G	3.2								20
4.0	3.8	4.0	G	..								21
G	G	G	..	..								22
4.0	G	G	G	3.0	..	2.6						23
3.7	3.5	..	4.8	4.6							2.2	24
3.8	3.6	3.5	G	G								25
3.8	3.7	4.3	G	G								26
3.9	3.6	3.6	3.3	2.8								27
4.3	4.2	G	3.4	G					3.6			28
3.9	3.8	3.6	3.3	..								29
..	4.2	G	..	..							2.6	30
4.0	..	3.7	G	G								31
2.7	29	22	20	10	..	1	..	..	1	1	4	Count
4.0	3.8	3.5	G	2.8	..	..	..	..	..	..	..	Median
4.1	3.9	3.8	3.6	3.4	..	..	..	..	..	..	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : December 1960

TABLE 6I  
Ionospheric Data  
75°E Mean Time

Latitude 10°2'N

Longitude 77°5'E.

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	2.6	2.6	2.3	2.5	2.3	E	2.4	2.9	2.7	3.2	3.9	4.0
2	2.6	2.7	3.0	3.2	2.6	2.6	2.5	3.0	2.8	4.1	2.6	3.4
3	2.5	1.9	2.2	2.4	2.4	2.1	2.2	2.3	2.6	3.1	2.9	2.8
4	2.4	1.7	1.9	2.0	1.8	1.9	2.6	2.8	3.3	4.0	3.2	3.5
5	2.2	2.2	1.7	1.8	1.9	1.9	2.4	2.2	2.9	3.4	3.2	3.2
6	2.4	2.2	2.2	1.9	C	C	C	C	C	C	C	C
7	2.3	2.5	2.4	2.6	2.5	2.5	2.5	2.9	3.6	4.1	3.2	3.5
8	1.9	2.1	1.7	2.4	1.9	1.7	2.3	3.2	3.4	4.0	3.0	3.9
9	2.2	1.5	1.9	1.8	2.0	2.2	2.5	2.8	3.6	3.4	3.0	3.2
10	1.5	2.0	C	1.8	1.8	2.1	2.3	3.0	2.7	3.0	2.5	3.1
11	2.6	2.2	2.4	2.8	2.5	2.3	2.6	2.6	2.8	2.7	2.8	3.0
12	2.4	1.8	2.9	2.2	2.1	1.8	2.2	2.6	2.7	3.0	2.7	3.1
13	2.0	2.2	2.2	1.6	1.9	1.9	2.4	2.7	2.8	3.1	2.9	3.2
14	2.3	2.2	2.2	2.2	1.8	E	2.3	2.6	2.7	2.8	3.8	4.2
15	2.1	2.2	2.0	2.2	2.4	1.9	2.4	2.8	3.3	3.8	2.8	3.4
16	C	C	C	C	C	C	C	C	2.9	3.6	3.0	3.3
17	1.7	2.1	2.2	2.0	2.0	2.0	2.3	2.8	3.2	3.7	2.9	3.2
18	2.4	2.2	2.2	2.3	1.9	1.6	2.3	2.8	2.8	3.8	2.6	3.0
19	2.4	2.0	2.0	2.2	2.2	2.6	2.5	2.8	3.2	3.6	3.2	3.0
20	2.4	2.0	2.0	1.7	1.6	1.9	2.2	2.6	3.2	3.8	3.0	3.0
21	2.2	1.7	1.9	2.2	1.8	1.9	2.6	2.2	2.6	3.8	3.0	3.2
22	2.4	2.1	2.2	1.8	2.0	1.8	1.9	2.6	2.8	3.0	3.0	2.9
23	1.7	1.7	1.8	2.9	1.9	E	2.2	2.4	C	C	3.2	3.2
24	2.4	2.4	2.2	2.4	2.2	2.0	2.0	2.6	2.7	3.1	3.0	3.0
25	1.6	1.9	2.3	2.0	1.8	1.7	2.2	2.0	2.4	3.0	2.6	3.0
26	1.9	2.0	2.2	2.1	2.3	2.0	2.4	2.6	3.1	2.7	2.7	2.7
27	2.0	2.4	1.8	1.8	1.7	2.0	2.4	2.6	2.6	2.8	2.7	2.9
28	1.7	2.3	1.8	1.6	1.8	1.9	2.0	1.8	2.5	3.0	2.7	2.9
29	2.7	2.1	1.8	2.2	2.1	2.0	2.0	2.8	2.8	3.1	3.1	3.0
30	2.1	2.0	2.5	2.1	1.8	E	2.4	2.5	2.6	4.3	4.2	3.1
31	2.4	2.0	2.0	2.0	2.1	2.2	2.3	2.5	2.5	3.1	2.7	3.3
Count	30	30	29	30	29	29	29	29	29	29	30	30
Median	2.3	2.1	2.2	2.1	2.0	1.9	2.3	2.6	2.8	3.2	3.0	3.2
Mean	2.2	2.1	2.1	2.1	2.0	2.1	2.3	2.6	2.9	3.4	3.0	3.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin

Unit : Mc

Month : December 1960

TABLE 61

Ionospheric Data

75°E Mean Time

Latitude 10°2'N.

Longitude 77°5'E.

12	13	14	15	16	17	18	19	20	21	22	23	Date
4.1	3.2	2.9	3.8	3.4	2.8	2.9	2.4	3.2	2.8	2.1	3.0	1
2.9	2.9	2.8	3.6	3.0	2.5	1.6	1.8	2.2	1.8	2.2	2.3	2
3.0	2.8	2.8	3.6	3.0	2.7	2.3	1.8	1.9	2.3	2.3	2.2	3
4.0	3.4	3.2	3.8	3.2	2.8	2.6	2.7	3.3	3.2	2.5	2.4	4
3.0	3.0	3.2	3.6	3.0	2.9	2.3	2.4	2.3	2.5	3.1	2.0	5
3.0	4.5	4.0	3.9	3.1	2.9	2.9	2.7	2.5	2.4	1.8	2.2	6
3.5	3.3	3.1	3.7	3.2	2.8	2.7	2.3	2.1	1.7	2.1	2.2	7
3.8	3.2	3.0	3.7	2.6	3.0	2.4	2.2	2.7	2.0	1.8	2.2	8
3.3	4.0	3.3	3.6	2.6	2.8	2.2	2.1	2.2	2.1	2.0	1.9	9
3.5	3.0	3.1	3.6	3.4	3.0	2.4	2.3	2.3	2.1	2.2	2.3	10
3.2	3.2	3.0	3.0	2.6	2.6	2.3	3.0	2.0	2.5	2.5	2.8	11
3.1	2.8	2.7	3.8	3.1	2.5	2.2	2.0	2.1	2.1	2.1	2.0	12
2.8	2.7	3.0	3.6	2.7	2.6	2.0	2.0	1.8	2.2	2.2	2.1	13
4.0	3.2	3.0	3.4	3.0	2.6	2.3	2.4	2.1	2.3	2.3	2.2	14
4.0	3.0	2.8	3.6	3.1	C	C	C	C	C	C	C	15
4.3	4.0	2.5	3.6	2.6	2.5	2.2	2.3	2.1	2.3	2.2	1.8	16
3.2	3.0	2.8	2.8	2.4	2.5	2.0	2.6	2.6	2.8	2.5	2.3	17
3.0	4.0	2.5	3.4	2.9	2.6	1.7	2.1	3.0	2.4	2.4	1.9	18
4.2	3.4	2.8	2.6	2.8	2.4	1.7	2.0	1.8	2.8	2.2	1.9	19
3.0	3.8	4.0	3.7	2.6	2.4	C	2.3	2.2	2.4	2.2	2.1	20
3.2	2.8	2.6	2.8	3.0	2.3	1.6	2.2	1.8	2.0	2.4	2.4	21
2.8	3.8	2.8	2.4	2.9	2.4	1.8	2.0	2.2	1.8	2.3	2.2	22
2.7	3.0	3.0	3.6	3.0	2.7	2.2	2.5	2.4	2.8	2.4	2.4	23
C	2.6	2.4	2.4	1.9	1.9	1.8	2.4	2.1	2.1	2.4	1.8	24
3.1	3.0	2.6	3.6	2.4	2.3	2.2	2.4	2.4	2.2	2.3	2.2	25
2.7	2.9	2.7	3.5	2.4	2.4	1.8	2.0	2.1	2.1	2.5	1.9	26
3.1	2.8	2.5	2.8	2.3	2.4	1.6	2.0	1.8	2.1	1.6	1.8	27
3.1	4.1	3.0	3.0	2.5	2.6	2.2	2.3	2.5	2.0	2.9	2.8	28
3.1	3.1	2.6	2.8	2.3	2.5	2.1	2.2	2.3	2.8	1.9	2.2	29
4.5	4.0	4.0	3.8	2.4	2.7	2.3	2.0	2.5	2.2	2.5	2.2	30
3.3	3.1	3.1	3.7	2.8	2.7	1.9	2.1	2.0	2.4	2.3	2.1	31
30	31	31	31	31	30	29	30	30	30	30	30	Count
3.2	3.1	3.0	3.6	2.8	2.6	2.2	2.2	2.2	2.2	2.3	2.2	Median
3.4	3.3	3.0	3.4	2.8	2.6	2.1	2.2	2.3	2.3	2.3	2.2	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : fmin  
Unit : Mc  
Month : December 1960

TABLE 61—Contd.  
Ionospheric Data  
75°E Mean Time

Latitude 10°2' N  
Longitude 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	2.2	2.4	2.4	2.8	2.6	2.8	2.8	2.9	2.9	4.0	4.0	4.3
2	2.8	2.8	3.2	2.5	2.6	2.9	2.8	3.1	3.8	2.9	3.0	3.0
3	1.7	2.1	1.8	1.8	1.9	2.2	2.6	2.4	3.0	2.8	C	2.8
4	1.8	1.8	2.2	2.1	2.4	2.2	2.8	3.2	3.0	3.2	3.4	4.0
5	1.8	2.4	1.8	1.8	2.2	1.8	2.5	2.7	3.0	3.0	3.4	3.1
6	2.3	2.2	1.9	1.7	C	C	C	C	C	C	C	C
7	2.2	2.2	2.2	2.2	2.2	2.2	2.8	3.3	3.6	3.2	3.6	3.6
8	1.9	1.8	2.2	2.2	1.6	2.2	2.6	3.1	3.3	3.0	3.3	3.8
9	2.0	1.8	2.1	1.8	2.2	1.9	2.6	2.5	4.4	3.0	3.4	3.4
10	1.8	2.4	C	2.0	2.3	2.1	2.6	2.4	2.8	2.7	2.9	3.0
11	3.0	2.5	2.7	2.4	2.3	2.2	2.6	2.4	2.7	2.6	2.9	3.0
12	2.4	2.4	2.3	1.9	2.0	2.5	2.8	2.4	2.9	2.5	2.7	3.0
13	2.0	1.6	2.2	2.1	2.3	1.9	2.6	2.6	3.5	3.0	3.0	3.1
14	2.4	2.2	2.2	2.5	1.8	E	3.0	2.4	2.5	3.2	4.0	4.2
15	2.1	1.9	2.4	2.0	2.2	2.1	2.8	3.2	4.0	3.2	2.8	3.0
16	C	C	C	C	C	C	C	C	2.7	3.0	3.0	3.0
17	2.1	1.7	1.8	2.0	2.1	1.7	2.4	2.9	3.5	3.0	3.2	3.2
18	2.4	2.1	2.2	2.1	2.3	2.3	2.8	2.9	2.9	2.8	2.9	3.2
19	2.2	2.0	2.0	2.3	2.1	2.2	2.6	3.1	3.4	3.0	3.2	3.4
20	1.8	1.7	1.9	1.7	1.9	1.7	2.8	2.4	3.4	2.8	3.0	3.0
21	2.2	2.2	2.0	1.7	2.1	2.0	2.8	2.8	3.0	3.0	3.2	3.0
22	2.0	1.9	2.0	1.8	1.5	2.0	2.4	2.2	3.0	2.4	2.8	2.6
23	1.8	1.8	1.8	2.0	2.0	E	2.6	2.2	C	C	3.4	3.0
24	2.2	2.6	2.3	2.2	1.9	E	2.5	2.7	2.8	3.0	3.2	C
25	1.7	1.9	1.9	2.1	2.2	1.7	2.3	2.3	2.7	2.5	2.6	2.8
26	2.0	1.3	2.0	1.9	1.9	2.1	2.7	2.8	2.6	2.9	2.6	2.8
27	2.3	1.8	1.7	2.1	2.0	2.2	2.4	2.2	2.7	2.6	2.8	3.1
28	1.7	1.8	1.6	1.8	1.8	2.0	2.3	2.2	2.6	2.5	2.7	3.1
29	2.2	2.2	2.1	2.1	2.0	1.8	2.9	2.5	3.0	2.8	3.1	3.0
30	2.0	1.8	2.2	2.2	E	E	2.8	2.4	2.8	4.5	3.2	3.2
31	2.3	2.0	2.6	2.1	2.0	2.1	2.6	3.0	2.7	3.0	2.9	3.1
Count	30	30	29	30	29	29	29	29	29	29	29	29
Median	2.1	2.0	2.1	2.1	2.1	2.1	2.6	2.6	3.0	3.0	3.0	3.1
Mean	2.1	2.1	2.1	2.1	2.1	2.1	2.6	2.7	3.1	3.0	3.1	3.2

Sweep 1.0 Mc, to 25.0 Mc, in 27 seconds

Characteristic : finin

Unit : Mc

Month : December 1960

TABLE 6I—Contd.

Ionospheric Data

75°E Mean Time

Latitude 10°2' N

Longitude 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
3.9	3.4	3.8	3.4	3.2	2.8	3.0	2.8	3.6	2.4	2.2	2.4	1
3.0	2.8	3.8	3.0	3.0	2.3	1.6	2.4	2.6	1.8	1.8	2.2	2
3.0	2.8	4.0	3.4	2.9	2.5	2.7	2.6	2.2	2.4	2.2	2.0	3
3.5	3.2	4.1	3.5	3.2	2.6	2.8	3.0	3.0	2.8	2.6	2.6	4
3.0	3.4	4.1	3.4	2.9	2.6	2.5	2.0	2.6	2.7	2.0	2.8	5
3.2	4.1	4.2	3.6	3.0	2.7	2.8	2.6	2.2	2.5	2.3	2.5	6
3.4	3.0	3.2	3.5	3.0	2.2	1.9	2.4	2.2	2.0	2.2	2.0	7
3.6	3.4	3.8	3.6	2.5	2.4	2.5	2.5	2.5	2.2	2.2	2.2	8
3.1	3.6	u4.2c	3.5	3.2	2.4	1.8	2.3	2.4	2.2	2.0	2.0	9
3.8	3.3	3.9	3.5	3.3	2.4	2.5	2.3	2.3	2.2	2.1	2.2	10
3.0	3.1	3.3	3.5	2.8	2.5	2.4	2.7	2.0	2.8	2.5	2.2	11
2.4	2.9	u4.0c	u3.5c	3.0	2.3	2.2	2.1	2.1	2.6	2.1	1.9	12
2.9	2.9	3.7	3.2	3.2	2.4	2.6	2.2	2.2	1.9	1.9	1.8	13
4.0	3.2	4.0	3.4	3.0	2.3	2.5	2.6	2.4	2.6	2.3	2.4	14
4.0	2.8	3.8	3.3	C	C	C	C	C	C	C	C	15
2.7	2.7	3.8	2.8	2.4	2.1	2.0	2.6	2.3	2.2	2.2	2.4	16
3.4	2.7	3.0	2.7	2.6	2.1	2.4	2.8	2.3	2.7	2.5	2.6	17
3.2	2.8	3.6	3.2	2.8	2.2	2.1	2.7	2.6	2.2	2.4	2.4	18
3.6	4.0	3.6	2.7	2.8	2.0	1.9	2.0	2.2	2.4	2.2	2.1	19
2.8	3.8	2.9	2.8	2.5	C	C	2.6	2.2	2.2	2.5	2.1	20
3.2	2.8	2.8	4.2	2.8	2.0	2.3	2.4	2.0	2.4	2.0	2.2	21
2.8	3.0	3.8	2.2	2.6	2.0	1.9	1.8	2.2	2.2	2.0	1.8	22
2.9	4.0	3.8	3.4	2.8	2.8	2.0	2.4	2.8	3.0	2.2	2.2	23
2.8	2.5	2.7	2.2	2.0	2.2	1.8	2.2	2.1	2.1	1.9	2.4	24
3.0	2.7	2.2	2.7	2.4	2.2	2.6	2.4	2.5	1.8	2.2	2.0	25
2.8	2.7	2.5	3.3	2.1	2.0	1.6	2.0	2.0	2.5	2.3	2.3	26
2.8	2.7	3.0	2.5	2.3	2.3	1.8	2.1	2.1	1.7	1.7	2.2	27
3.3	3.8	3.2	2.7	2.7	2.5	2.1	2.4	2.2	2.3	u3.1c	2.6	28
2.8	2.7	3.1	2.5	2.7	2.2	2.2	2.2	2.0	2.0	1.8	2.2	29
4.4	3.1	3.6	2.8	2.8	2.4	2.2	2.0	2.2	2.3	2.4	1.8	30
3.1	4.1	3.1	3.7	2.6	2.4	1.8	2.1	2.3	2.1	1.9	2.7	31
31	31	31	31	30	29	29	30	30	30	30	30	Count
3.1	3.0	3.8	3.3	2.8	2.3	2.2	2.4	2.2	2.2	2.2	2.2	Median
3.2	3.2	3.5	3.2	2.8	2.3	2.2	2.4	2.3	2.3	2.2	2.2	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h' F<sub>2</sub>

Unit : Km

Month : December 1960

TABLE 62  
Ionospheric Data  
75°E Mean Time

Latitude 10° 2' N

Longitude 77° 5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1							..	L	L	255	275	270
2							..	..	L	L	L	L
3							..	..	L	L	275	L
4							..	L	L	L	L	L
5							..	..	L	L	L	L
6							C	C	C	C	C	C
7							..	L	L	L	L	L
8							L	L	L	L	L	L
9							..	L	L	L	L	L
10							..	L	L	L	L	L
11							..	L	L	L	L	L
12							..	L	L	L	L	L
13							..	..	L	L	295	L
14							..	..	L	L	L	L
15							..	..	L	L	L	L
16							C	C	L	L	L	L
17							..	..	L	L	L	L
18							..	..	L	L	L	L
19							..	..	L	L	L	L
20							..	L	L	L	L	L
21							..	L	L	L	L	L
22							..	..	L	L	L	L
23							..	..	C	C	L	u29(1).
24							..	..	L	L	L	L
25							..	L	L	L	L	L
26							..	..	L	L	L	L
27							..	L	L	L	L	L
28							..	L	L	L	L	L
29							..	..	L	L	L	L
30							..	L	L	L	L	L
31							..	..	L	L	L	L
Count . .							..	..	..	1	3	2
Median . .							..	..	..	..	..	..
Mean . . .							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc, in 27 seconds.

647

Characteristic : h' F2

Unit : Km

Month : December 1960

TABLE 62

Ionospheric Data

75°E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

12	13	14	15	16	17	18	19	20	21	22	23	Date
320	L	L	L	L	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
					..							5
L	L	L	L	L	L							6
L	L	L	L	L	..							7
L	L	L	L	L	..							8
L	L	L	L	L	..							9
					..							10
L	L	L	L	L	..							11
L	L	L	L	L	..							12
L	L	L	L	L	..							13
L	L	L	L	L	..							14
					..							15
L	L	L	L	L	..							16
L	L	L	L	L	..							17
u300L	L	L	L	L	..							18
L	L	L	L	L	..							19
L	L	L	L	L	..							20
LH	L	L	L	L	..							21
L	L	L	L	L	..							22
L	L	L	L	L	..							23
L	L	L	L	L	..							24
					..							25
L	L	L	L	L	..							26
L	L	L	L	L	..							27
L	L	L	L	L	..							28
L	L	L	L	L	..							29
					..							30
L	L	L	L	L	..							31
2	..	..	..	..	..							Count
..	..	..	..	..	..							Median
..	..	..	..	..	..							Mean

Sweep 1.0 Mc to 25.0 Mc. in 27 seconds.

647

Characteristic : h'F2

TABLE 62—Contd.

Latitude : 10° 2' N

Unit : Km

Ionospheric Data

Longitude : 77° 5' E

Month : December 1960

75°E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	L
2								..	L	275	L	A
3								L	L	L	C	L
4								L	L	L	L	L
5								..	L	L	L	L
6								C	C	C	C	C
7								L	L	L	L	L
8							L	L	L	L	L	L
9							..	L	L	L	L	L
10							L	L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15								L	L	L	L	L
16								..	L	L	L	L
17								L	L	L	L	L
18								..	L	L	L	L
19								L	L	L	u290L	L
20								L	L	L	L	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	C	L	L	L
24								L	L	L	L	C
25								L	L	L	L	L
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
31								..	L	L	L	L
Count							..	..	..	1	1	..
Median							..	..	..	..	..	..
Mean							..	..	..	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F2

TABLE 62—Contd.

Latitude : 10°

Unit : Km

Ionospheric Data

Longitude : 77°5'

Month : December 1960

75°E Mean Time

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
E	L	L	L	..								5
L	L	L	L	L								6
L	L	L	L	..								7
L	L	L	L	..								8
L	L	L	L	..								9
L	L	L	L	..								10
L	L	L	L	..								11
L	L	L	L	..								12
L	L	L	L	L								13
L	L	L	L	..								14
L	L	L	L	..								15
L	L	L	L	L								16
L	L	L	L	L								17
L	L	L	L	..								18
L	L	L	L	L								19
L	L	L	L	L								20
LH	L	L	L	L								21
L	u270L	L	L	L								22
u290L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L								26
L	L	L	L	L								27
L	L	L	L	L								28
L	L	L	L	..								29
L	L	L	L	..								30
L	L	L	L	L								31
1	1	..	..	..								Count
..	..	..	..	..								Median
..	..	..	..	..								Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F  
Unit : Km  
Month : December 1960

TABLE 63  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	235	230	230	200	240	E	270	230	210	200	195	195 <sub>H</sub>
2	375	410	400	300	250	265	270	235	220	210	200	A
3	220	210	200	210	210	225	260	230	210	200	200	190
4	210	205	205	215	210	220	260	225	210	200	195	190
5	220	225	225	220	200	205	260	230	215	205	210	200
6	230	220	220	230	C	C	C	C	C	C	C	C
7	255	300	300	260	230	200	215	235	215	210	205	200
8	225	235	220	220	220	205	235	230	210	200	190	200
9	u270 <sub>F</sub>	u270 <sub>F</sub>	u270 <sub>F</sub>	u245 <sub>F</sub>	200	200	240	225	205	200	195	195
10	235	235	C	235	205	205	245	230	210	200	195	190
11	255	240	250	240	220	220	240	230	210	200	190	200 <sub>H</sub>
12	220	210	220	240	250	235	240	230	215	210	200	195
13	205	220	230	230	220	205	240	230	220	200	200	190
14	220	220	210	230	220	E	260	225	215	200	195	200
15	210	215	225	240	260	240	240	225	215	205	200	200
16	C	C	C	C	C	C	C	C	220	220	A	A
17	210	230	225	210	220	245	250	230	210	200	200	195
18	240	255	245	260	260	260	265	230	210	200	200	190
19	240	240	240	240	260	265	265	230	220	200	200	200
20	260	250	205	210	240	240	240	230	210	200	190	200
21	250	240	240	240	280	285	240	225	210	200	200	200
22	230	220	215	240	280	260	245	230	210	205	200	200
23	225	220	225	205	220	E	240	220	C	C	180	205
24	u265 <sub>Q</sub>	260	245	225	240	L	250	220	200	185 <sub>H</sub>	175 <sub>H</sub>	180 <sub>H</sub>
25	270	240	220	240	230	235	255	230	225 <sub>H</sub>	195 <sub>H</sub>	175 <sub>H</sub>	180 <sub>H</sub>
26	260	270	230	230	240	230	245	230	210	195	180	180
27	270	275	245	260	280	225	230	220	200	205	200	190
28	250	240	240	240	250	270	265	240	220	200	200	190
29	225	240	220	220	225	220	240	230	210	u210 <sub>Q</sub>	200	200
30	270	250	200	215	220	E	270	225	200	u230 <sub>B</sub>	220	200
31	230	245	255	280	235	210	240	230	220	200	200	200
Count	30	30	29	30	29	28	29	29	29	29	29	28
Median	235	240	225	230	230	235	245	230	210	200	200	200
Mean	245	245	235	235	235	230	250	230	210	205	195	195

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km

Month : December 1960

TABLE 63  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N

Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
200	205	235	210	230	250	300	390	380	375	380	400	1
A	195	200	200	220	250	320	340	280	240	255	240	2
195 <sub>HF</sub>	185 <sub>HF</sub>	195	210	220	240	280	330	335	340	270	250	3
180	195	200	200	220	245	300	360	405	335	260	240	4
200	195 <sub>HF</sub>	200	210	220	250	295	320	340	310	300	275	5
245	200	200	220	225	245	300	315	305	260	240	240	6
200	200	200	220	225	255	310	330	260	230	230	235	7
200	200	200	215	225	250	280	300	900	285	280 <sub>F</sub>	280 <sub>F</sub>	8
200 <sub>HF</sub>	195	200	215	220	250	290	315	300	260	250	235	9
185	190	220	220	235	250	290	340	350	330	290 <sub>F</sub>	265	10
190	190	195	210	220	245	280	320	300	260	240	235	11
200	180	200 <sub>HF</sub>	220	225	245	275	330	340	290	255	235	12
185	200	200	200	225	250	285	325	280	235	240	230	13
200	190	185 <sub>HF</sub>	200	220	245	275	305	295	240	235	220	14
200	190 <sub>HF</sub>	195 <sub>HF</sub>	220	235	C	C	C	C	C	C	C	15
210	200	205	220 <sub>HF</sub>	250	250	260	225	210	235	220	215	16
195	190	190	215	220	240	250	260	240	225	220	235	17
200	200	195	210	220	240	280	300	270	240	280	260	18
200	220	200	200	210	240	240	260	230	220	220	250	19
205	195	215	205	230	235	C	220	200	220	220	225	20
210	200	200	200	220	240	240	240	240	270	240	220	21
200	200	190	200	215	240	250	230	220	200	220	230	22
200	180	190	200	215	230	245	240	210	220	220	250	23
C	190 <sub>HF</sub>	180 <sub>HF</sub>	200	220 <sub>A</sub>	A	260	300	280	215	220	230	24
190 <sub>HF</sub>	200	190 <sub>HF</sub>	220	215	235	235	240	225	205	200	240	25
180	180	200	200	220	255	260	240	230	210	220	240	26
180	180	200	215	230	240 <sub>HF</sub>	265	270	220	220	235	250	27
180	240 <sub>A</sub>	195	215	225	240	280	340 <sub>F</sub>	285 <sub>F</sub>	260	240	240	28
195	190	195	210	220	240	265	320	280	270	300	280	29
200	215	200	205	220	245	260	280	250 <sub>F</sub>	220	230	220	30
190	195	215	225	230	260	270	305	295	280	270	240	31
29	31	31	31	31	29	29	30	30	30	30	30	Count
200	195	200	210	220	245	275	305	280	240	240	240	Median
195	195	200	210	225	245	275	295	275	255	250	245	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.



Characteristic : h'F

Unit : Km

Month : December 1960

TABLE 63—Contd.

Ionospheric Data

75°E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	220	225	210	200	300	F	240	220	205	200	200	200
2	395	415	340	265	250	300	250	225	215	200	195	A
3	215	205	205	200	210	255	235	220	200	200	C	195
4	210	205	220	215	220	250	240	215	200	200	185	185
5	220	230	230	205	200	220	235	220	210	200	205	200
6	230	220	230	220	C	C	C	C	C	C	C	C
7	270	300	275	250	200	215	245	225	210	200	200	200
8	220	215	220	220	215	225	235	220	215	195	175	200
9	u265F	u270F	u270F	215	200	205	235	220	u220B	185	200	195H
10	245	255	C	220	210	220	240	220	205	200	195	185
11	250	240	245	230	220	220	235	220	210	190	200	180
12	220	215	225	250	245	230	240	220	210	200	200	200
13	220	225	240	240	200	220	240	225	205	200	200	190
14	220	210	220	240	230	E	240	220	205	200	200	200
15	210	210	240	260	255	220	235	220	220	200	200	200
16	C	C	C	C	C	C	C	C	u245A	205	A	220
17	230	220	215	210	255	235	240	220	200	200	195	195
18	245	250	250	260	255	260	240	220	205	200	195	190
19	235	240	250	250	270	240	240	220	200	200	200	200
20	250	225	215	220	240	220	240	220	210	190	185	200
21	240	240	250	250	300	270	240	220	200	200	210	200
22	230	210	230	250	270	230	235	220	200	200	200	200
23	220	220	220	220	240	E	230	210	C	C	180	200
24	260	255	230	225	240	E	240	215	200	180H	175H	C
25	250	230	220	230	240	u240C	240	225	205H	180H	175H	175H
26	270	260	220	240	250	260	230	215	200	185	180	180
27	270	260	260	280	250	210	240	215	210	210	200	185
28	225	240	230	235	270	270	255	220	205	200	200	200
29	235	240	220	220	215	225	240	220	210	200	200	185
30	280	220	200	225	E	E	240	220	195	u230B	205	195
31	240	240	285	275	205	225	240	225	205	200	200	195
Count	30	30	29	30	29	28	29	29	29	29	28	28
Median	235	230	230	230	240	230	240	220	205	200	200	200
Mean	245	240	235	235	240	235	240	220	210	200	195	195

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'F

Unit : Km

Month : December 1960

TABLE 63—Contd.

Ionospheric Data

75°E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
205	200	200	215	240	265	380	380	365	360	400	395	1
200	205	200	205	235	270	365	305	260	240	250	220	2
180	180	205	210	230	255	320	345	330	305	280 <sub>F</sub>	210	3
195	200	205	200	235	265	345	400	400	300	250	225	4
200	200	210	220	235	270	320	330	335	300	275	240	5
200	200	225	220	235	260	305	305	280	245	240	240	6
200	200	200	220	240	270	320	300 <sub>F</sub>	245	230	230	225	7
200	205	210	225	235	265	300	305	300	275 <sub>F</sub>	280 <sub>F</sub>	295 <sub>F</sub>	8
190	210	220	220	240	260	320	320	280 <sub>F</sub>	260	250	225	9
180	195	220	220	240	260	325	350	345	300 <sub>F</sub>	275	270	10
185 <sub>H</sub>	200	200	215	235	260	320	320	280	255	235	225	11
195	195	215	220	240	260	315	340	315	270	240	220	12
200	200	200	205	240	260	320	310	255	230	230	225	13
200	200	220 <sub>B</sub>	220	240	255	300	305	270	240	230	220	14
200	200	200	225	C	C	C	C	C	C	C	C	15
200	200	220	220	240	260	240	215	230	220	220	220	16
200	185	200	220	230	240	260	255	220	220	230	240	17
200	200	200	210	230	260	300	285	250	260	280	260	18
200	210	200	205	230	245	260	250	220	220	240	260	19
200	200	200	200	235	C	C	220	200	220	230	230	20
200	200	220	210	230	240	245	240	260	255	220	230	21
200	200	210	210	225	245	250	215	210	215	235	230	22
200	200	200	210	230	240	250	220	215	220	230	260	23
180 <sub>H</sub>	185	180 <sub>H</sub>	A	A	250	280	300	240	210	220	260	24
180 <sub>H</sub>	190 <sub>H</sub>	200	200	220	240	250	250	205	210	200	250	25
175	180	245 <sub>A</sub>	200	230	260	255	225	215	220	220	260	26
180	180	200	220	240	260	275	240	215	220	240	270	27
205 <sub>A</sub>	205	200	215	235	260	305	F	280 <sub>F</sub>	260 <sub>C</sub>	240 <sub>C</sub>	225	28
180	190	205	210	230	260	300	320	280	280 <sub>C</sub>	280	270	29
200	200	220	200	230	250	270	280	230	220	250	240	30
190	220 <sub>B</sub>	220	230 <sub>B</sub>	240	265	280	300	290	280	260	240	31
31	31	31	30	29	29	29	29	30	30	30	30	Count
200	200	205	215	235	260	300	300	260	240	240	240	Median
195	200	210	215	235	255	295	290	265	250	250	245	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

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Characteristic : h'E

TABLE 64

Latitude : 10° 2' N

Unit : Km

Ionospheric Data

Longitude : 77° 5' E

Month : December 1960

75°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									A	A	B	B
2									A	B	A	A
3									A	A	A	A
4									..	B	A	A
5									A	A	A	A
6								C	C	C	C	C
7									A	B	A	A
8									A	B	A	A
9									B	A	A	A
10									100	A	A	A
11								100	A	A	A	A
12								100	A	A	A	A
13									A	B	A	A
14									B	B	B	B
15									..	B	100	B
16									A	B	A	A
17									100	B	A	A
18									110	B	100	A
19									A	B	100	100
20									A	B	100	100
21									100	B	A	A
22									100	100	A	100
23									C	C	A	A
24									100	100	A	A
25								110	105	100	A	A
26								..	..	A	A	A
27								..	A	A	A	A
28								105	A	A	A	A
29									110	C	A	A
30									A	B	B	A
31									A	A	A	A
Count								4	8	3	4	3
Median								..	100	..	..	..
Mean								..	105	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

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Characteristic : h'E

TABLE 64

Latitude 10° 2' N

Unit : Km

Ionospheric Data

Longitude 77° 5' E

Month : December 1960

75°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
B	100	100	B	B								1
A	A	A	A									2
A	A	A	B									3
B	A	A	B									4
A	A	A	B									5
A	B	B	B									6
A	A	A	A									7
A	A	A	B	A	A							8
A	A	A	B	A								9
A	A	A	A	A								10
A	A	A	A	A								11
A	A	A	A	A								12
B	A	A	B	106								13
B	A	100	B	..								14
		A	B	..								15
B	B	A	B	105								16
A	A	A	100	105								17
100	B	100	B	..								18
B	100	B	100	..								19
A	B	B	B	A								20
A	100	100	100	..								21
100	B	100	100	..								22
A	A	105	B	B								23
C	A	A	A	A								24
A	A	100	B	100			A					25
A	A	A	B	115								26
A	A	A	A	A								27
A	B	A	A	A								28
A	A	A	A	A								29
B	B	B	B	A								30
A	A	A	B	115								31
2	3	7	4	6	..							Count
..	..	100	..	110	..							Median
..	..	100	..	110	..							Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

655

Characteristic : h'E

TABLE 64—*contd.*

Latitude 10° 2' N

Unit : Km

Ionospheric Data

Longitude 77° 5' E

Month : December 1960

75°E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								..	A	B	B	B
2								..	B	A	A	A
3								A	A	A	C	A
4								..	A	A	A	B
5								..	A	A	A	A
6								..	C	C	C	A
7								..	A	A	A	A
8								A	B	A	A	A
9								100	B	A	A	A
10								100	100	A	A	A
11								100	A	A	A	A
12								100	A	A	A	A
13								A	B	A	A	A
14								B	B	B	B	B
15								—	B	A	A	A
16								..	A	100	A	A
17								110	A	A	A	A
18								..	105	100	A	A
19								..	A	100	100	100
20								120	A	100	100	100
21								100	100	A	A	A
22								100	A	A	100	100
23								100	C	C	A	A
24								105	100	A	A	C
25								105	100	A	A	A
26								..	A	A	A	A
27								A	A	A	A	A
28								A	A	A	A	A
29								105	105	A	A	A
30								A	A	B	A	A
31								..	A	A	A	A
Count								12	6	4	3	3
Median								100	100	..	..	..
Mean								105	100	..	..	..

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'E  
Unit : Km  
Month : December 1960

TABLE 64—*contd.*  
Ionospheric Data  
75°E Mean Time

Latitude 10°2' N  
Longitude 77°5' E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
B	110	B	B	..								1
A	A	A	..	..								2
A	A	B	B	..								3
A	A	B	..	..								4
			..	..								5
R	B	B	..	..								6
A	A	A	A	..								7
A	A	B	B	A								8
A	A	B	B	..								9
A	A	A	A	..								10
A	A	A	A	..								11
A	A	A	B	..								12
B	A	B	B	..								13
B	A	B	A	..								14
				..								15
A	A	B	110	110								16
A	A	100	110	..								17
100	100	B	B	..								18
100	B	B	100	..								19
A	B	B	115	A								20
100	100	100	B	..								21
100	100	B	..	..								22
A	B	B	B	A								23
A	A	A	A	A								24
A	100	100	100	120								25
A	A	A	B	110								26
A	A	A	A	A								27
A	B	105	A	105								28
A	A	A	A	..								29
B	A	B	105	..								30
A	B	115	B	110								31
4	5	5	6	5								Count
..	100	100	110	110								Median
..	100	105	105	110								Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

Unit : Km

Month : December 1960

TABLE 65  
Ionospheric Data  
75°E Mean Time

Latitude 10°2' N

Longitude 77°5' E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									100	100	G	G
2									100	115	100	100
3								100	100	100	100	100
4								100	100	G	100	100
5								100	100	100	100	100
6					C	C	C	C	C	C	C	C
7									100	100	100	100
8									100	100	100	100
9									G	100	100	100
10	100	..	C						G	100	100	100
11	100	..	100					G	100	100	100	100
12								G	100	100	100	100
13									100	100	100	100
14									100	G	100	100
15									..	G	100	100
16	C	C	C	C	C	C	C	C	100	G	100	100
17									100	100	100	100
18									G	100	100	100
19									100	100	100	100
20	100	100	..						100	100	100	100
21								100	100	100	100	100
22								..	G	100	100	100
23								G	C	C	100	100
24	100	..	100					..	G	100	100	100
25	105	..	..					G	100	100	100	100
26								..	..	100	100	100
27								..	100	100	100	100
28								100	100	100	100	100
29									G	C	100	100
30									100	B	100	100
31									100	100	100	100
Count	5	1	2	..	..	..	..	4	20	23	29	29
Median	100	..	..	..	..	..	..	..	100	100	100	100
Mean	100	..	..	..	..	..	..	..	100	100	100	100

Sweep 1.0 Mc, to 25.0 Mc, in 27 seconds,

659

Characteristic : h'Es

TABLE 65

Latitude: 10°2'N

Unit : Km

Ionospheric Data

Longitude: 77°5'E

Month : December 1960

75°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
G	G	110	G	G								1
100	100	100	100									2
100	100	100	G									3
100	100	100	G									4
100	100	100	100									5
100	G	G	G									6
100	100	100	100									7
100	100	100	100	100	100							8
100	100	100	100	100	100							9
100	100	100	100	100	100						120	10
100	100	100	100	100								11
100	100	100	100	100								12
100	100	100	G	G								13
100	100	100	G	..								14
100	100	100	100	..	C	C	C	C	C	C	C	15
100	B	100	G	G								16
100	100	100	100	G								17
100	G	100	G	..								18
G	G	G	100	..								19
100	G	G	G	100		C			-			20
100	100	100	G	-					110			21
G	G	G	G	-								22
100	100	100	G	G	100							23
C	100	100	100	100	100							24
100	100	100	G	G								25
100	100	100	G	G								26
100	100	100	100	100								27
100	115	100	100	100					110	100		28
100	100	100	100	100								29
100	100	G	G	100								30
100	100	115	G	G						105		31
27	24	25	15	11	3	..	..	..	2	2	1	Count
100	100	100	100	100	..	..	..	..	..	..	..	Median
100	100	100	100	100	..	..	..	..	..	..	..	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

659



Characteristic : h'Es

TABLE 65—*contd.*

Latitude: 10.2°N

Unit : Km

Ionospheric Data

Longitude: 77.5°E

Month : December 1960

75°E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								..	100	G	G	G
2								..	G	100	100	100
3								100	100	100	C	100
4								..	100	100	100	100
5								100	100	100	100	100
6								..	C	C	C	C
7								..	100	100	100	100
8								100	100	100	100	100
9								100	B	100	100	100
10	100							G	G	100	100	100
11	100							100	100	100	100	100
12								G	100	100	100	100
13								100	100	100	100	100
14								100	G	100	100	100
15								..	G	100	100	100
16								..	100	100	100	100
17								G	100	100	100	100
18								..	100	100	100	100
19								..	100	100	100	G
20			..					100	100	100	100	100
21							100	..G	G	100	100	100
22								..G	100	100	100	100
23								G	C	C	100	100
24								100	100	100	100	C
25	105							G	100	100	100	100
26								..	100	100	100	100
27								100	100	100	100	100
28								100	100	100	100	100
29								G	110	100	100	100
30								100	100	100	100	100
31								..	100	100	100	100
Count	3	..	..	..	..	..	1	12	23	28	28	27
Median	..	..	..	..	..	..	..	100	100	100	100	100
Mean	..	..	..	..	..	..	..	100	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : h'Es

TABLE 65—*contd.*

Latitude: 10°2'N

Unit : Km

Ionospheric Data

Longitude: 77°5'E

Month : December 1960

75°E Mean Time

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
G	105	G	G									1
100	100	100	100									2
100	100	G	G									3
100	100	100	..									4
100	100	100	..									5
100	G	G	..									6
100	100	100	100									7
100	100	100	100	100	100					120	..	8
100	100	100	100							..	..	9
100	100	100	100							..	100	10
100	100	100	100									11
100	100	100	100									12
100	100	G	G									13
100	100	100	G									14
100	100	100	100									15
100	100	100	G	G								16
100	100	100	100						110	..	..	17
100	100	G	100						..	..	..	18
G	G	G	100						..	100	100	19
100	G	G	G	100					..	..	..	20
100	100	100	G									21
G	G	G	..									22
100	100	G	G	100	..	110	..	..	..	..	105	23
100	100	100	100	100	120	..	..	..	..	..	105	24
100	100	100	G	G	..							25
100	100	100	G	G								26
100	100	100	100	100								27
100	115	G	100	G		..	..	..	110	..	..	28
100	100	100	100	..	..	..	..	..	..	..	..	29
100	100	G	G	..	..	..	..	..	..	..	100	30
100	B	100	G	G	..	..	..	..	110	..	..	31
28	26	20	15	5	2	1	..	..	3	2	5	Count
100	100	100	100	100	..	..	..	..	..	..	100	Median
100	100	100	100	100	..	..	..	..	..	..	100	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M 3000) F<sub>2</sub>

TABLE 66

Latitude: 10°2'N

Unit : —

Ionospheric Data

Longitude: 77°5'E

Month : December 1960

75°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	3.05	3.05	3.10	3.35	3.40	E	2.90	3.00	2.35 <sub>H</sub>	2.95	2.90	2.85
2	F	F	F	F	F	3.00	2.95	2.70	2.80	2.70	2.65	2.60
3	2.90	3.25 <sub>F</sub>	3.25	3.40	3.50	3.45	3.05	3.05	2.80	2.65	2.60	2.55
4	2.95	3.15	3.25	3.20	3.40	3.45	2.95	2.95	2.85	2.65	2.50	2.55
5	3.00	3.10	3.10	3.25	3.45	3.55	3.10	2.95	2.70	2.50	2.45	2.50
6	2.90	3.10	3.10	3.20	C	C	C	C	C	C	C	C
7	3.00	2.80	2.80	2.95	3.20	3.45	3.10	2.95	2.65	2.40	2.40	2.45
8	3.10	3.00	3.20	3.30	3.25	3.45	3.30	3.25	3.00	2.50	2.30	2.50
9	F	2.60	F	3.00 <sub>F</sub>	3.25	3.45	3.20	3.30	3.00	2.90	2.55	2.40
10	2.90	3.00	C	3.20	3.45	3.40	3.20	3.25	3.05	2.80	2.45	2.30
11	2.95	3.10	3.10	3.10	3.25	3.45	3.20	3.25	3.00	2.60 <sub>R</sub>	2.40	2.50
12	3.15	3.25	3.45	3.25	3.10	3.15	3.20	3.15	2.80	2.70	2.45	2.35
13	3.05	3.10	3.05	3.10	3.30	3.30	3.05	3.25	3.00	2.70	2.45	2.40
14	3.30	3.40	3.50 <sub>s</sub>	3.50	3.45	E	3.10	3.10	2.85	2.70	2.70	2.50
15	3.45 <sub>s</sub>	3.40	3.30	3.10	3.05	3.20	3.30	3.40	3.30	3.10	2.70	2.45
16	C	C	C	C	C	C	C	C	2.80	2.70	2.75	2.60
17	3.30 <sub>s</sub>	3.30	3.40	3.45	3.45	3.35 <sub>R</sub>	3.25	3.10	3.00	2.90	2.60	2.60
18	3.30	3.20	3.20	3.15	3.30	3.20	3.05	2.90	2.80	2.70	2.80	2.55
19	3.00	3.10	3.05	3.10	2.90	3.10	3.20	3.10	27.0	2.65	2.65	2.60
20	3.25	3.30	3.55	3.50	3.30	3.30	3.20	3.30	2.95	2.55	2.65	2.75
21	3.30	3.30	3.40 <sub>R</sub>	3.40	3.00 <sub>v</sub>	3.10 <sub>F</sub>	F	F	2.09 <sub>H</sub>	2.60	2.70	2.55
22	3.30	3.40	3.50	3.30	3.10	3.20	3.35	3.40	3.00	2.65	2.65	2.65
23	3.30 <sub>s</sub>	3.30	3.40	3.45	3.45	E	3.30	3.30	C	C	2.80	2.65
24	3.20	3.20	3.40	3.50	3.50	3.70	3.30	3.35	2.50 <sub>H</sub>	2.70	2.70	2.75
25	3.20	3.35	3.40 <sub>s</sub>	3.35	3.40	3.50	3.20	3.35	2.70	2.65	2.70	2.70
26	3.15	3.10	3.30	3.25	3.30	3.20 <sub>R</sub>	3.10	3.30	3.05	2.25 <sub>R</sub>	2.55	2.55
27	3.20	3.10	3.15	3.05	3.05	3.30	3.05	3.10	2.70	2.65	2.55	2.50
28	3.10	3.30 <sub>s</sub>	3.20	3.20	3.15 <sub>R</sub>	3.15 <sub>R</sub>	3.05	3.00	2.80	2.60	2.55	2.55
29	3.25	3.20	3.35	3.40	3.40	3.40	3.30	3.35	3.15	2.80	2.30	2.35
30	2.85	2.95	3.50	3.45	3.40	E	2.90	3.10	2.70	2.50	2.55	2.25
31	3.40	3.20	3.15	3.00	3.35	3.50 <sub>R</sub>	3.00	3.40	3.05	2.40	2.35	2.40
Count	28	29	27	29	28	25	28	28	29	29	30	30
Median	3.15	3.20	3.25	3.25	3.30	3.35	3.15	3.20	2.85	2.65	2.60	2.55
Mean	3.15	3.15	2.25	3.25	3.30	3.35	3.15	3.15	2.85	2.65	2.60	2.55

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M 3000) F<sub>2</sub>

Unit : —

Month : December 1960

TABLE 66

Ionospheric Data

75°E Mean Time

Latitude: 10 2°N

Longitude: 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Date
2.80	2.75	2.70	2.70	2.60	R	2.45s	2.20	2.30F	F	2.20F	F	1
2.55	2.40	2.40	2.30	2.25	2.35	2.20	2.30	2.50F	2.55	2.60	2.90	2
2.45	2.45	2.35	2.25	2.45	2.50	2.45	2.35	2.40	2.45	2.60F	F	3
2.50	2.45	2.40	2.40	2.25	2.40	2.30	2.10	2.20	2.40	2.65	2.80F	4
2.40	2.35	2.30	2.20	2.25	2.40	2.40	2.40	2.45	2.50	2.70F	2.75	5
2.65	2.70	2.70	2.75	2.75	R	2.45	S	2.55s	2.75	3.00	3.05	6
2.40	2.40	2.30	2.25	2.20	2.30	2.20	2.30	2.70	2.90	2.95	2.90	7
2.45	2.35	2.25	2.10	2.35	2.45	2.45	2.50	2.50	2.50	2.50F	2.60	8
2.50	2.45	2.30	2.20	2.20	2.45	2.45	2.55	2.65	2.65	2.75	3.00	9
2.40	2.30	2.25	2.25	2.35	2.45	2.55	2.40	2.40	2.55	2.55s	2.80	10
2.50	2.40	2.30	2.40	2.40	2.55	2.50	2.50	2.45	2.70	2.95	3.10	11
2.35	2.40	2.35	2.40	2.45	2.50	2.50	2.40	2.40	2.55	2.80	2.90	12
2.45	2.50	2.50	2.45	2.35	2.25	2.25	2.30	2.50	2.70	2.70	2.95	13
2.45	2.50	2.45	2.45	2.50	2.55s	2.45	2.50	2.50	2.90	3.10	3.20	14
2.35	2.40	2.30	2.35	2.40	C	C	C	C	C	C	C	15
2.60	2.70	2.65s	R	RH	2.45	2.50	2.80	3.00	2.85	3.10	3.45	16
2.50	2.45	2.50	2.50	2.55	2.55	2.65	2.75	3.00	3.30	3.30	3.25	17
2.60	2.75	2.70	2.50	2.35	2.35	2.50	2.50	2.70	2.90	2.75	2.85	18
2.75	2.85	2.90	2.85	2.70s	2.60	2.50	2.65	2.85	3.20	3.25	3.20	19
2.75	2.90	2.95	2.90	2.80	2.80	C	2.90	3.15	3.40	3.40	3.30	20
2.50	2.60	2.55	2.70	2.75	2.70	2.60	2.75	2.85s	2.90	3.10	3.30	21
2.70	2.85	2.90	2.85	2.85	2.75	2.60	2.70s	3.10	3.30	3.25	3.25	22
2.70	2.75	2.85	2.90	3.05	3.00	2.85	2.95	3.20	3.30	3.25	3.20	23
C	2.70	2.60	2.70	2.70	2.80	2.60	2.45	2.65	3.15	3.35	3.30	24
2.70	2.60	2.75	2.85	3.00	2.90	2.95	2.95	3.20	3.45	3.50	3.20	25
2.50	2.60	2.60	2.70	2.80	2.70	2.45	2.50	2.80	3.10	3.25	3.10	26
2.45	2.60	2.55	2.55	2.50	2.40	2.50s	2.60	3.05	3.20	3.15s	3.05	27
5.55	2.70	2.60	2.50	2.40	2.40	2.50	2.45	2.55	2.75	2.95	3.10	28
2.40	2.45	2.60	2.50	2.60	2.55	2.45	2.40F	2.55F	2.60	2.60	2.65	29
2.40	2.45	2.50	2.60	2.55	2.55	2.50	2.60	2.75	3.00	3.20	3.30s	30
2.30	2.30	2.45	2.60	2.60	2.55	2.40	2.45s	2.55	2.60	2.75	2.95	31
30	31	31	30	30	28	29	29	30	29	30	28	Count
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.60	2.85	2.95	3.10	Median
2.50	2.55	2.55	2.50	2.55	2.55	2.50	2.50	2.70	2.85	2.90	3.05	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M 3000) F<sub>2</sub>TABLE 66—*contd.*

Latitude: 10°2'N

Unit : —

Ionospheric Data

Longitude: 77°5'E

Month : December 1960

75°E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	3.10	3.10	3.25	3.60	R	F	3.15	2.75	2.85	3.05	2.75	2.90
2	F	F	F	F	3.10 <sub>F</sub>	F	3.00	2.80	2.80	2.55	2.50	2.55
3	3.00	3.35 <sub>F</sub>	3.35	3.35	3.40	2.80 <sub>H</sub>	3.10	2.95	2.70	2.60	C	2.50
4	3.00	3.25	3.20	3.25	3.50	2.95	2.95	2.85	2.70	2.60	2.60	2.50
5	3.05	3.10	3.15	3.30	3.55	3.40	3.10	2.80	2.60	2.50	2.40	2.50
6	3.00	3.05	3.15	3.30	C	C	C	C	C	C	C	C
7	2.90	2.75	2.85	3.05	3.40	3.45	3.10	2.70	2.55	2.40	2.45	2.40
8	3.00	3.15	3.20	3.35	3.30	3.40	3.35	3.15	2.75	2.25	2.40	2.45
9	2.55 <sub>F</sub>	F	F	3.15	3.45	3.50	3.30	3.15	3.05	2.70	2.35	2.55
10	3.00	2.95	C	3.30	3.40	3.50	3.30	3.20	2.95	2.60	2.30	2.30
11	3.00	3.10	3.05	3.20	3.40	3.30	3.20	3.15	2.80	2.35	2.40	2.45
12	3.20	3.25	3.25	3.15	3.10	3.15	3.15	3.05	2.70	2.60	2.40	2.35
13	3.10	3.05	3.05	3.20	3.45	3.35	3.25	3.15	2.85	2.55	2.40	2.35
14	3.40	3.50 <sub>s</sub>	3.50	3.45	3.50	E	3.20	2.95	2.70	2.70	2.60	2.50
15	3.50	3.30	3.20	3.10	3.10	3.25	3.35	3.35	3.20	2.95	2.50	2.35
16	C	C	C	C	C	C	C	C	2.80	2.70	2.65	2.60
17	3.30	3.30	3.40	3.50	3.40	3.40	3.20	3.00	2.90	2.75	2.70	2.60
18	3.25 <sub>s</sub>	3.20	3.20 <sub>s</sub>	3.15	3.30	3.20	2.90 <sub>H</sub>	2.90	2.95	2.70	2.65	2.60
19	3.10	3.10	3.00 <sub>s</sub>	3.00	3.00	3.25	3.20	2.90	2.60	2.65	2.60	2.65
20	3.30	3.40	3.50	3.45	3.35	3.45	3.35	3.15	2.75	2.60	2.70	2.75
21	3.50	3.35	3.30	3.20	3.00 <sub>v</sub>	F	F	3.00	2.55	2.60	2.60	2.50
22	3.35	3.50	3.40	3.25	3.00	R	3.40	3.30	2.75	2.40 <sub>H</sub>	2.70	2.70
23	3.35	3.30	3.35	3.40	R	E	3.45	3.10	C	C	2.65	2.70
24	3.20	3.30	3.40	3.50	3.50	E	3.50	3.00	2.70	2.65	2.60	C
25	3.25	3.40	3.40	3.40	3.55 <sub>R</sub>	3.45 <sub>C</sub>	3.40	3.10	2.55	2.75	2.65	2.65
26	3.15	3.20	3.40	3.25 <sub>R</sub>	3.20 <sub>R</sub>	R	3.35	3.30	2.80 <sub>H</sub>	2.45	2.65	2.50
27	3.05	3.00	3.15	3.00	3.15	3.45	3.25	2.95	2.50 <sub>H</sub>	2.65	2.45	2.50
28	3.25	3.25	3.25	3.15	2.95	3.20	3.05	2.95	2.80	2.45	2.50	2.60
29	3.20	3.30	3.40	3.30	3.30	3.45 <sub>R</sub>	3.35	3.20	3.05	2.55	R	2.40
30	2.90 <sub>F</sub>	3.15	3.50	3.50 <sub>R</sub>	E	E	3.20	3.00	2.50	2.45	2.35	2.50
31	3.30	3.25	3.05	3.10	3.55	3.50	3.40	3.20	2.75	2.30	2.30	2.30
Count	29	28	27	29	26	20	28	29	29	29	28	29
Median	3.15	3.25	3.25	3.25	3.40	3.40	3.20	3.00	2.75	2.60	2.60	2.50
Mean	3.15	3.20	3.25	3.25	3.30	3.30	3.25	3.05	2.75	2.60	2.55	2.50

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : (M 3000) F<sub>2</sub>

Unit : —

Month : December 1960

TABLE 66—*contd.*

Ionospheric Data

75°E Mean Time

Latitude: 10°2'N

Longitude: 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.70	2.70	2.65	2.60	R	R	U2.30C	U2.25s	2.30F	F	F	F	1
2.50	2.50	2.40	2.30	2.40	2.30	2.25	2.40	2.70	2.50	2.85	2.90	2
2.45	2.40	2.35	2.30	2.45	2.50	2.35	2.40	2.45	2.50	F	2.90	3
2.50	2.45	2.40	2.35	2.35	2.30	2.20	2.20	2.40	2.50	2.70	2.90	4
2.35	2.30	2.30	2.20	2.30	2.50	2.40	2.35	2.45	2.50	2.60	2.90	5
2.70	2.65	2.75	2.70	2.70	2.60	S	2.50	2.65	2.85	3.00	3.05	6
2.40	2.35	2.25	2.15	2.25	2.35	2.30	2.45	2.75	2.90	2.90	3.00	7
2.45	2.35	2.20	2.15	2.45	2.50	2.45	2.50	2.55	2.50	2.50F	2.55	8
2.55	2.40	2.30	2.15	2.25	2.40	2.40	2.50	2.60	2.60	2.90	3.00	9
2.30	2.25	2.25	2.35	2.40	2.50	2.40	2.30	U2.45s	U2.50s	U2.65s	2.85	10
2.45	2.35	2.30	2.35	2.45	2.50	2.45	2.40	2.50	2.85	3.05	3.10	11
2.45	2.40	2.35	2.45	2.45	2.55	2.45	2.40	2.50	2.70	2.90	3.00	12
2.50	2.45	2.45	2.40	2.30	U2.25R	2.30	2.30	2.60	2.70	2.80	3.10	13
2.50	2.45	2.45	2.45	J2.55R	2.50	2.45	2.50	2.70	2.90	3.10	3.30	14
2.35	2.40	2.35	2.35	C	C	C	C	C	C	C	C	15
2.65	2.65	R	J2.25RH	2.50	2.50	2.70	2.95	U2.70R	3.05	3.40	3.40	16
2.50	2.50	2.60	2.50	2.55	2.55	2.70	2.90	3.10	3.20	3.30	3.30	17
2.65	2.75	2.65	2.40	2.30	2.50	2.50	2.60	2.80	2.80	2.75	2.90	18
2.80	2.85	2.85	2.75	2.60	2.50	2.55	U2.70s	3.00	3.30	3.20	3.20	19
2.85	2.90	2.90	2.90	2.80	C	C	3.15	3.20	3.45	3.45	3.40	20
2.60	2.60	2.65	2.75	2.65	2.70	2.70	U2.85s	3.00	3.05	3.30	3.25	21
2.75	2.95	2.85	2.90	2.80	U2.65R	2.65	3.00	3.30	3.30	3.25	U3.30s	22
2.75	2.80	2.90	3.00	3.05	2.90	2.85	3.10	3.20	3.40	3.20	3.10	23
2.65	2.75	2.70	2.80	2.85	2.70	2.50	2.45	2.90	3.25	U3.30s	3.20	24
2.70	2.60	2.70	2.95	3.00	3.00	2.90	3.05	3.50	3.30	3.10	3.10	25
2.45	2.65	2.60	2.80	2.75	2.60	2.45	2.60	3.05	3.20	3.15	3.15	26
2.60	2.65	2.40	2.55	2.45	2.45	2.55	2.80	3.15	3.25	3.20	3.00	27
2.65	2.60	2.50	2.40	2.40	U2.50s	2.50	2.50	2.65	2.95	U3.00C	3.25	28
2.35	2.60	2.55	2.55	2.55	2.60	2.40	F	2.60	2.65	2.65	2.80	29
2.45	2.45	2.55	2.60	2.55	2.50	U2.60R	2.60	2.85	3.15	3.35	3.35	30
2.20	2.45	2.50	2.65	2.60	2.40	2.50	2.50	2.55	2.65	2.90	3.00	31
31	31	30	31	29	28	28	29	30	29	28	29	Count
2.50	2.50	2.50	2.45	2.50	2.50	2.45	2.50	2.70	2.90	3.00	3.10	Median
2.55	2.55	2.50	2.50	2.55	2.55	2.50	2.60	2.75	2.90	3.00	3.10	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.